Acton . d . 62 b 28.

A Way to get WEALTH,

Containing fixe Principall Vocations, for Callings, in which every good Husband or housewife, may lawfully imploy themselves.



AS

1. *The nature, ordering, curing, breeding, choyce, use, and feeding of all sorts of Cattel, and Familie for the seruice of man: As also the riding and dieting of Horses, either for War or Pleasure.*
2. *The knowledge, use, and laudable practice of all the Recreations meet for a Gentleman.*
3. *The Office of a Houf-wife, in Physick, Chyrurgery, extraction of Oyles, Banquets, Cookery, ordering of Feasts, preserving of Wine, concealed Secrets, Distillations, Perfumes, ordering of Woolle, Hives, Flax, Dying, use of Dayries, Making, Brewing, Baking, and the profit of Oats.*
4. *The enriching of the Weald in Kent.*
5. *The Husbanding and enriching of all sorts of barren Grounds, making them equall with the most fruitfull: with the preservation of Swine. And a computation of man, and Cattles labours, &c.*
6. *The making of Orchards, Planting, and Grafting, the Office of Gardening and the Ornaments, with the best Husbanding of Bees.*

The first five books gathered by *G. M.* The last by Master *W. L.* for the benefit of Great Brittain.

The Tenth time corrected, and augmented by the Author.

LONDON,
Printed by *William Wilson*, for *George Sambridge*, at the Bible and Lyon in Paul's
[illegible]

06::1595.

(06::1597-1602 & 17 to 20-38)

Cheape, and Good

HUSBANDRY

FOR

The well-Ordering of all Beast and Fowles, and for the general Cure of their Diseases.

Containing the Natures, Breeding, Choice, Use, feeding, and Curing of the Diseases, of all manner of Cattel, as Horse, Oxe, Cow, Sheep, Goats, Swine, and tame Conies.

Shewing further the whole Art of Riding great Horses, with the breaking and ordering of them, and the dyeting of the Running, Hunting, and Ambling Horse, and the manner how to use them in their Travel.

Also, approved Rules for the Cramming, and fatting of all sorts of Poultry, and Fowls, both tame and wild, *&c.* And divers good and well approved Medecines, for the Cure of all the Diseases in Hawks, of what kind soever.

Together with the use and profit of Bees, the manner of Fish-ponds, and the taking of all sorts of Fish.

Gathered together for the generall good and profit of the Common-wealth, by exact and assured experience from English practises, both certain, easie, and cheap, differing from all former and forrain experiments, which either agreed not with our Clime, or were too hard to come by, or over-costly, and to little purpose: all which herein are avoided. Newly corrected and inlarged with many Excellent Additions.

The Tenth Edition.

LONDON,
Printed by *W. Wilson*, for *George Sambridge*, at the Bible on Ludgate-hill neer Fleet bridge. 1660.

HUSBANDRY

FOR

The well-Ordering of all Beast and Fowles,
and for the general Cure of their Diseases.

06 : 1597

LONDON,
Printed by W. W. for George Sawbridge, at the Bible

TO THE

Right Honourable,

And most ennobled with all inward, and outward Vertues,

RICHARD SACKVILLE,

Baron of *Buckhurst*, and Earle of *Dorset*, &c.

ALthough the monstrous shapes of Bookes (Right Honourable, and best enabled Lord) have with their disguised and unprofitable visard like faces, halfe scar'd even Vertue her selfe from that patient Defence and Patronage, which in former Ages most Nobly shee employed, to preserve them from Envy: Yet so much I know, the largenesse of your Worthy Brest is indued with Wisdome, Courage, and Courtesy, that notwithstanding the vanities of our ignorant Writers, you wil be pleased out of your Noble Spirit, favourably

favorably to behold whatsoever shall bring a publick good to our Countrey, at which end I have only aymed in this small Book. In which, I have run far from the way or tract of other Writers in this nature yet I doubt not but your Honour shall find my path more easie, more certain, and more safe then any; nay by much, far less difficult or dangerous to walk in; I must confess, something in this nature I have formerly published, as namely of the Horse only, with whose nature and use I have been exercised and acquainted from my Childhood, and I hope, without boast, need not yeeld to any in this Kingdome. Yet in this Work, I hope your Lordship, and all other Princely maintainers of that worthy and serviceable Beast, shall find, I have found out, and herein explained a nearer and more easie course for his preservation and health, then hath hitherto been found or practised by any, but my self only: whatsoever it is, in all humbleness I offer it as a sacrifice of my Love and service to your Honour, and will ever whilst I have breath to be

Be your Honours

in all dutifull service,

G. M.

TO THE COURTEOUS READER.

THere is no Arteſt, or man of Induſtry (Courteous and Gentle Reader) which mixeth judgment with his experience, but findeth in the travel of his labours better and neerer courſes to make perfect the beauty of his work, then were at firſt preſented to the eye of his knowledge: for the mind being pre-occupied, and buſied with a vertuous ſearch, is ever ready to catch hold of whatſoever can adorn or illuſtrate the Excellency of the thing, in which he is employed; and hence it hapneth that my ſelf having ſeriouſly beſtowed many years to find out the truth of theſe knowledges, of which I have intreated in this Book; have now found out the infallible way of curing all diſeaſes in Cattle; which is by many degrees more certain, more eaſie, leſs difficult, and without all manner of coſt and extraordinary charges, then ever hath been publiſhed by any home born or forrain practiſer. Wherein (friendly Reader) thou ſhalt find that my whole drift is to help the needfull in his moſt want and extreamity. For having many times

times in my journying, seen poor and rich mens Cattell fall [illegible] sick, have watching by the way, some [illegible] or Dunghil, and [illegible] upon other [illegible] have also seen their Cattel or Horses [illegible] which could be brought alive to a Smith, or else where they might receive Cure: Nay, if with much pains they have been brought to the place of Cure, yet have I seen Smiths so unprovided of Apothecary Simples, that for want of a matter of six pence, a Beast hath died worth many Angells. To prevent this, I have found out those certain and approved Cures, wherein if every good Horse-lover, or Husbandman, will but acquaint his knowledge with a few herbs, or common Weeds, he shall be sure in every Field, Pasture, Meadow, or Land-furrows; nay almost by every high way side, or blind Ditch, to find that which shall preserve and keep his horse from all sudden extreamities. If thou shalt find benefit, think mine hours not ill wasted: if thou shalt not have occasion to approve them, yet give them thy gentle passage to others, and think me, as I am,

Thy Friend,

G. M.

TO

A ſhort Table expounding all the hard words in this Book.

A.

Ana Zingiberinum, or *Orpanox*, is a yellow hard ſubſtance to be bought at the Pothecaries.

Ariſtolochia-longa, otherwiſe called red *Madar*, is an Herb growing almoſt in every field.

Ariſtolochia-rotunda, is the Herb called *Galingale*.

Agrimony, or *Egremony*, is an uſual and known Herb.

Ammis, *Cornu-cervi*, is an Herb of ſome called *Bulwort*, *Biſhops-weed*, or *Herb-william*.

Aniſe, is that Herb which bears *Aniſe-ſeeds*.

Anet, of ſome called *Dill*, is an Herb like *Fennel*, onely the ſeeds are broad like *Orenge-ſeed*.

Agnus-Caſtus, of ſome called *Tuleſaine*, is an Herb with reddiſh leaves, and ſinewy, like *Plantain*.

Egyptiacum, is a reddiſh *Unguent*, to be bought at the Pothecaries, and is ſoveraign for *Piſtulaes*.

Aſſafœtida, a ſtinking ſtrong Gum, to be bought at the Pothecaries.

Adraca, or *Adarces*, is that *Salt* which is ingendred on the Marſhes, by the violence of the Suns heat after the rain is gone away.

Aſarion, is an Herb growing amongſt ſtones, as on walls, or ſuch like; it appeareth by night, it hath yellow flowers like *Foxgloves*, and the leaves are round and blewiſh.

Aloes, is a bitter Gum, to be bought at the Pothecaries.

B.

Beet, or *Beets*, is an Herb with long broad leaves and red ſtalks, and grows in hedge-rows.

Bolearmoniack, is a red hard earthly ſubſtance, to be bought at the Pothecaries, and is of a cold and binding nature.

Broomwort, is an Herb with brown coloured leaves, and beareth a blew flower, and moſt commonly grows in Woods.

C

Creſſes, are of two kinds, *Water-Creſſes*, and *Land-Creſſes*: they have broad ſmooth leaves, and the firſt grows in moiſt places, the latter in Gardens, or by high-wayes.

Comin, ſee *Ameos*.

Carthamus, is an Herb in taſte like *Saffron*, and is called *baſtard Saffron*, or *Mock-Saffron*.

Calamint, is an ordinary Herb, and groweth by Ditches ſides by high-wayes, and ſometimes in Gardens.

Coriander, is an Herb which beareth a round little ſeed.

Chives, are a ſmall round Herb growing in Gardens, like little young *Onions*, or *Scallions*, not above a week old.

D

Diapente, a ſoveraign powder made of five equal ſimples, as *Bayberries*, *Ivory*, *Ariſtolochia-rotunda*, *Myrrhe*, and *Gentiana*, may be bought of the Pothecary.

Rettony, is an Herb called *Pepper-wort*, or *Horſe-radiſh*, and grows in many open fields.

Dragon, is an Herb common in every Garden.

E

Elecampane; is an Herb of ſome called *Horſ-helm*, and grows almoſt in every field, and every Garden.

Eye-bright, is an Herb growing in every Meadow.

F

Fenugreek, is an Herb which hath a long ſlender trayling ſtalk, hollow within, and ſown in Gardens, but eaſieſt to be had at the Apothecaries.

Fernſmund, is an Herb of ſome called *Water-Hearn*, hath a triangular ſtalk, and is like *Polypody*, and it grows in Bogs and hollow grounds.

G

Galingale, ſee *Ariſtolochia-rotunda*.

H

Horſe-mint, is an Herb that grows by water ſides, and is called *Water-mint*, or *Brook-mint*.

Horſ-

Horſe-helme, ſee *Elecampana.*

Houſe-leek, is a weed which grows upon the tops of houſes that are thacht, and are like unto a ſmall *Artichoke.*

Hearb Robert, hath leaves like *Hearb Bennet*, and ſmall flooers of a purple colour, and grows in moſt common fields and Gardens.

I

Ivory, is the ſhaving of the *Elephants* tooth, or the old *Harts* or *Stags* horn, being the ſmooth white thereof.

K

Knot-graſſe, is a long round weed, with little round ſmooth leave,, and the ſtalks very knotty and rough, winding and wreathing one ſeam into another very confuſedly, and groweth for the moſt part in very moyſt places.

L

Lettice, is a common ſallet in every Garden.

Lollium, is that weed which we call *Cockell*, and groweth amongſt the corn in every field.

Liverwort, is a common Hearb in every garden.

M

Mayth, is a Weed that grows amongſt corn, and is called of ſome *Hogs-fennell.*

Myrrhe, is a Gum to be bought at the Apothecaries.

Man-drake, is an Hearb which grows in Gardens, and beareth certain yellow Apples, from whence the Apothecaries draw a ſoveraign Oyle for broken bones.

N

Nepe, ſee *Calamint.*

O

Origanum, is an Hearb called *Wild-Marjoram*, and grows both in open fields, or in low Copſes.

Orifice, is the mouth, hole, or open paſſage of any wound or ulcer.

Oppoponax, a Drug uſuall to be bought at the Apothecaries.

P

Pitch of *Burgundy*, is *Roſen*; and the blacker the better.

Plantain, is a fat leaf and ſinewy, growing cloſe to the ground, and it is called Whay-bred leaf.

Ptioll-rorall, is an Hearb that groweth both in fields and gardens, and is best when it flowreth.

Patch-greaſe, it that tallow which is gotten from the boyling of Shoo-makers ſhreads.

Q

Quinque-folio, of ſome caled *Cinque-foyle*, is that Herb which is called *five-leaved* graſſe.

R

Red-Oker, is a hard red ſtone, which we call *Ruddle*, *Orell*, *Marking-ſtone*.

S

Selendine, or *Tetterwort*, is a Weed growing in the bottome of Hedges, which being broke, a yellow juice will drop and run out of it.

Sherwit, is an Herb with many ſmall leaves, and grows moſt in Gardens.

Stubwort, is an Heab which grows in woddy places, and is called *Wood Sorrell*.

Sanguis Draconis, is a hard red Gum to be bought at the Apothecaries.

Sperma Cati, is the ſeed of the *Whale*, excellent for inward bruiſes, and to be bought at the Apothecaries.

Stonecrop, is a green weed growing on the tops of walls.

Sal-armoniack, is a Drug to be bought at the Apothecaries.

T

Tuſſilaginis, is that Weed which we call *Colts-foot*.

Triapharmacon, a compoſition made of three ſimples, and to be bought at the Apothecaries.

Turn-merick, is a yellow Simple, of ſtrong ſavour, to be bought at the Apothecaries.

V

Verdigreaſe, is a green fatty Gum drawn from Copper: and is to be bought at the Apothecries.

W

Wood-roſe, or *Wild Eglantine*, is that ſmall thinne flower which grows upon Bryars in Woods or Hedges.

Y

Yarrow, is an Herb called the *Water Violet*, and grows in Lakes or Mariſh grounds.

THE

Oct: 1597.

THE GENERALL CURE AND ORDEING of all Horſes: As alſo the whole Art of Riding great Horſes; with the breding, breaking, and ordering of them: Together with the manner how to uſe the running, hunting, and ambling horſe, before, in, and after their Travell.

UNIVERSITY LIBRARY

CHAP. I.

Of the Horſe in generall, his choice for every ſeverall uſe, his Ordering, Diet, and beſt preſervation for health, both in Travell, and in Reſt.

THE full ſcope and purpoſe of this work, is in few, plain, and moſt undoubted true words, to ſhew the Cure of all manner of diſeaſes belonging to all manner of neceſſary Cattell, nouriſhed and preſerved for the uſe of man, making by way of demonſtration, ſo eaſie and plain a paſſage, to the underſtanding and accompliſhment of the ſame, that not the ſimpleſt which hath priviledge to be eſteemed no Idiot; nor the pooreſt, if he can make two ſhillings, but ſhall both underſtand how to profit himſelfe by the Book, and at the cheapeſt rate purchſe all the receipts and ſimples declared in the whole Volume. For in ſober truth this Book is fit for every Gentleman, Husbandman, and good

mans pocket, being a memory which a man carrying about him will, when he is cald to account, give a man full satisfaction whether it be in the field, in the Town, or any other place where a man is most unprovided.

Nature of Horses.

And now forasmuch as the Horse of all creatures is the noblest strongest, and aptest to do a man the best and worthiest services both in Peace and War, I think it not amisse first to begin with him. Therefore of his nature in generall: he is valiant, strong, and nimble, and above all other beasts most apt and able to indure the extreamest labours, the moyst quality of his composition being such, that neither extream heat doth dry up his strength, nor the violence of cold, freze the warm temper of his moving spirits; but that where there is any temperate government, there he withstandeth all effects of sickneſse, with an uncontrouled constancy. He is most gentle and loving to the Man, apt to be taught and not forgetfull when an impression is fixed in his brain. He is watchfull above all other beasts, and will indure his labour with the most empty stomack; he is naturally given to much cleanlineſse, is of an excellent scent, and offended with nothing so much as evil savors.

The choice of Horses, & their shapes.

Now for the choice of the best Horse, it is divers, according to the use for which you will employ him. If therefore you would have a Horse for the Wars, you shall chuse him that is of a good tall stature, with a comely lean head, an outswelling forehead, a large sparkling eye, the white whereof is covered with the eyebrows, and not at all discerned, or if at all, yet the least is best; a small thin ear short and pricking; if it be long, well carried and ever moving, it is tolerable; but if dull or hanging, most hatefull: a deep neck, large crest, broad brest, bending ribs, broad and streight chine, round and full buttock, with his huckle-bones hid, a tayle high and broad, set on neither too thick, nor too thin; for too much hair shews sloath, and too little too much coller and heat: a full swelling thigh, a broad, flat, and lean leg, short pastern'd, strong joynted, and hollow bones, of which the long is best, if they be not wier'd, and the broad round the worst.

Colours of Horses.

The best colours are Brown-bay, Daple-gray, Roand, Bright-bay, Black, with a white neer foot behind, white far foot before, white rache, or white star, Chesnut or Sorrel, with any of those marks

marks, or Dun with a black list: And of theſe horſes, for the Wars the Courſer of *Naples* is accounted the beſt, then the *Almain*, the *Sardinian*, or the *French*.

If you would chuſe a Horſe for a Princes Seat, any ſupream Magiſtrate, or for any great Lady of State, or woman of eminence you ſhall chuſe him that is of the fineſt ſhape, the beſt rein, who naturally bears his head in the beſt place, without the help of the mans hand; that is of nimbleſt and eaſieſt pace, gentle to get upon, bold without making affrights, and moſt familiar and quiet in the company of other Horſes: his colour would ever be milk-white, with red ſtrains, or without, or elſe fair daple gray with white Mane, and white tayl: And of theſe the *Engliſh* is beſt, then the *Hungarian*, the *Sweathland*, the *Poland*, the *Iriſh*. Horſes for a Princes Seat.

If you will chuſe a Horſe onely for travel, ever the better ſhape the better hope, eſpecially look that his head be lean, eyes ſwelling outward, his neck well riſen, his chine well riſen, his joynts very ſtrong; but above all his paſterns ſhort and ſtraight, without bending his going, and exceeding hollow and tough hoofs; let him be of temperate nature, neither too furious, nor too dull, willing to go without forcing, and not deſirous to run when there is no occaſion. Horſes for Travel.

If you would chuſe a Horſe for hunting, let his ſhape in general be ſtrong, and well knit together, making equal proportions; for as unequal ſhapes ſhew weakneſſe, ſo equal members aſſure ſtrength and indurance. Your unequal ſhapes are a great head to a little neck, a big body to a thin buttock, a large limb to a little foot, or any of theſe contraries, or where any member ſuits not with the whole proportion of the body, or with any limb next adjoyning. Above all let your hunting Horſe have a large lean head, wide noſtrils, open-chauld, a big weaſand, and the wvind-pipe ſtraight, looſe, well covered, and not bent in the pride of his Reining: The Engliſh Hore baſtardized with any of the former Races firſt ſpoke of, is of all the beſt. Hunting horſe.

If you chuſe a Horſe for running, let him have all the fineſt ſhape that may be, but above all things, let him be nimble, quick and fiery, apt to fly with the leaſt motion: long ſhapes are ſufferable, for though they ſhew weakneſſe, yet they aſſure ſudden ſpeed. And the beſt Horſe for his uſe, is the *Arabian*, *Barbary*, or his Running horſe.

his baſtard, Jennets are good, but the Turks are better.

Coach-Horſe. If you will chuſe a Horſe for the Coach, which is called the ſwift draught, let his ſhape be tall, broad, and well furniſht, not groſſe with much fleſh, but with the bigneſſe of his bones, eſpecially look if he have a ſtrong neck, a broad breaſt, a large chine, ſound clean limbs, and tough hooves: and for this purpoſe, your large Engliſh Geldings are beſt, your Flemiſh Mares next, and your ſtrong ſton'd Horſes tolerable, *Flemiſh* or *Friſons*.

Pack-Horſes. If you will chuſe a Horſe for portage, that is, for the Pack or Hampers, chuſe him that is exceeding ſtrong of Body and Limbs, but not tall, with a broad back, out ribs, full ſhoulders and thick withers; for if he be thin in that part, you ſhall hardly keep his back from galling: be ſure that he take a ſtrong ſtride with his feet, for their pace being neither trot nor amble, but onely a foot pace, he which takes the largeſt ſtrides goes at the moſt eaſe, and rids his ground faſteſt.

Cart-Horſes. Laſtly, if you will chuſe a Horſe for the Cart or Plough, which is the ſlow draught, chuſe him that is of moſt ordinary height, for Horſes in the Cart unequally ſorted, never draw at eaſe, but the tall hang up the low Horſe. Let them be of good ſtrong portion, big breaſted, large bodied, and ſtrong limb'd by nature rather inclin'd to crave the whip, then to draw more then is needfull. And for this purpoſe Mares are moſt profitable; for beſides, the effecting of your work, they yearly bring you forth increaſe: therefore, if you furniſh your draught with Mares to breed, obſerve in any wiſe, to have them fair fore-handed, that is, good head, neck, breaſt, and ſhoulders; for the reſt it is not ſo regardfull, onely let her body be large; for the bigger room a Foal hath in the dams belly, the fairer are his members. And above all things obſerve never to put your draught beaſts to the Saddle, for that alters their pace, and hurts them in their labour.

Of Mares.

Now for the ordering of theſe ſeveral Horſes: firſt for the Horſe for ſervice, during the time of his teaching, which is out of the Wars, you ſhall keep him high and luſtily; his food, no Straw but good Hay, his provender clean dry Oates, or two parts Oates, and one part Beans, or Peaſe, well-dried and hard, the quantity of half a peck at a watering, morning, noon, and evening, is ſufficient.

In-

In his dayes of reſt, you ſhall dreſſe him betwixt five and ſix in the morning, water betwixt ſeven and eight, and feed from nine till after a eleven: in the afternoon, you ſhall dreſſe betwixt three and four, water betwixt four and five, and give provender till ſix, then litter at eight, and give food for all night. The night before he is ridden, you ſhall at nine of the clock at night take away his hay from him; at four of the clock in the morning give him a handfull or two of Oats, which being eaten, turn him upon his ſnaffle, rub all his body and legges over with dry cloaths, then ſaddle him, and make him fit for his exerciſe. Soon as he is cal'd for to be ridden, waſh his bit in fair water, and put it into his mouth with all other things neceſſary, draw up his girths, and ſee that no buckles hurt him: then lead him forth, and as ſoon as he hath been ridden, all ſweating as he is, lead him into the ſtable; and firſt rub him quickly over with dry wiſps, then take off his ſaddle, and having rubb'd him all over with dry cloaths, put on his houſing cloth, then ſet on the ſaddle again, and girt it: then lead him forth, and walk him up and down in gentle manner an hour or more, till he be cold, then ſet him up, *and after two or three hours faſting*, turn him to his meat: then in the after noon, curb, rub, and dreſſe him, then water him, and order him as is aforeſaid.

For ordering of the Horſe for a Prince, or great Ladyes ſeat, *let it be in his time of reſt, like unto the horſe for ſervice: and in his time of labour like the travelling horſe, as ſhall be ſhewed inſtantly: only becauſe he is to be more choicely kept, I mean in the beautifulleſt manner, his coat lying ſmooth, and ſhining, and his whole body without any ſtain or diſfouredneſſe*; you ſhall ever when he hath been ridden, and commeth in much ſweating, preſently have him into the ſtable, and firſt rub him down with clean wiſps, then taking off his ſaddle, with a Sword-blade whoſe edge is rebated; you ſhall ſtroak his neck and body clean over, leaving no ſweat nor filth that can be gotten out; *then cloath him up, and ſet on the ſaddle, and walk him forth as aforeſaid.* After, order and diet him as you do other travelling Horſes: dry Oats is his beſt provender, if he be fat and full; and Oats and Beans, if he be poor, or ſubject to loſe his fleſh quickly.

Ordering of horſes for a Princes ſeat.

Ordering of travelling horſes.

For your travelling horſe, you ſhall feed him with the fineſt

hay in the Winter, and the ſweeteſt graſs in Summer: His Provender muſt be dry Oats, Beans, Peaſe or bread, according to his ſtomack: In the time of reſt, half a peck at a watering is ſufficient; In the time of his labour, as much as he will eat with a good ſtomack. When you travel, water him two hours before you Ride; then rub, dreſſe, and laſtly feed; then bridle up, and let him ſtand an hour before you take his back. Travell moderately in the morning till his wind be rack'd, and his limbs warmed, then after do as your affaire require. Be ſure at night to water your Horſe two miles before you come to your journeys end, then the warmer you bring him to his Inn, the better: walk not, nor waſh not at all, the one doth beget colds, the other foundring in the feet or body: but ſet him up warm, well ſtopt, and ſoundly rubb'd with clean litter. Give no meat whilſt the outward parts of your Horſe are hot or wet with ſweat, as the ear roots, the flanks, the neck, or under his chaps: but being dry, rub and feed him according to the goodneſſe of his ſtomack. Change of food begetteth a ſtomack, ſo doth the waſhing of the tongue or noſtrils with vinegar, wine and ſalt, or warm urine. Stop not your Horſes fore-feet with Cowes dung, till he be ſufficiently cold; and that the blood and humours which were diſperſed, be ſetled into their proper places. Look well to his back, that the ſaddle hurt not, to the girths that they gall not, and to his ſhooes, that they be large, faſt, and eaſie.

Ordering of hunting horſes.

For the ordering of your hunting Horſe, let him in the time of his reſt, have all the quietneſſe that may be, much litter, much meat, and much dreſſing, water ever by him, and leave him to ſleep as long as he pleaſeth. Keep him to dung, rather ſoft then hard, and look that it be well coloured, and bright, for darkneſſe ſhews greaſe, and redneſſe inward heating. After exerciſes, let maſhes of ſweet malt, be his uſuall ſcourings; and let bread of clean beans, or beans and wheat equally mixt, be his beſt food; and beans and oats the moſt ordinary.

Ordering of running horſes.

For the ordering of your running Horſe, let him have no more meat then to ſuffice nature, drink once in four and twenty hours, and dreſſing every day once, at Noon onely. Let him have much moderate exerciſe, as Morning and Evening ayrings, or the fetching of his water, and know no violence but in his courſes only.

Let

Let him ſtand dark and warm, have many cloaths, and much litter, being wheat ſtrow only. If he be very fat, ſcour oft; if of reaſonable ſtate, ſcour ſeldome; if lean, then ſcour but with a ſweet maſh only. Be ſure your horſe be empty before he cou-ſe; & let his food be the fineſt, lighteſt, and quickeſt of digeſtion that may be: the ſweats are more wholeſome that are given abroad, and the cooling moſt naturall which is given before he come into the ſtable. Keep his limbs with cool oyntments, and by no means, let any hot ſpices come into his body: if he grow dry inwardly, waſh't meat is very wholeſome. If he grow looſe, then give him ſtraw in more abundance. Burning of ſweet perfume in the ſtable is wholeſome; and any thing you either do about your horſe, or give unto your horſe, the more neat, cleanly, and ſweet it is, the better it nouriſheth.

Orderi ng of Coach horſes.

For ordering the Coach-horſe, let him have good dreſſing twice a day, Hay and Provender his belly full, and Litter enough to tumble on, and he cannot chuſe but proſper. Let him be walk't and waſh't after travell, for by reaſon of their many occaſions to ſtand ſtill, they muſt be inur'd to all hardneſs, though it be much unwholeſome. Their beſt food is ſweet Hay, and well dried Beans and Oats, or Bean-bread: Look well to the ſtrength of their ſhooes, and the galling of their Harneſſe. Keep their leggs clean, eſpecially about the hin'er feet-locks, and when they are in the houſe, let them ſtand warm cloathed.

Ordering of the Pack and Cart horſe.

For the ordering of the Pack-horſe, or the Cart-horſe, they need no waſhing, walking, or hours of faſting; only dreſſe them well, look to their ſhooes and backs, and then fill their bellies, & they will do their labour. The beſt food is ſweet Hays, Chaff, or Peaſe or Oat huls and Peaſe, or chopt ſtraw, and Peaſe mixt together, once a weak to give them warm Grains and Salt: is not amiſſe, for their labour will prevent the breeding of worms, or ſuch like miſchiefs.

For the preſervation of al horſes.

Now for the generall preſervation of horſes health, it is good whilſt a horſe is in youth and ſtrength to let him blood twice in the year, that is, beginning of the Spring, & beginning of the Fall, when you may beſt afford him a weeks reſt. After you have let him blood two dayes after, give him a comfortable drench, as 2 ſpoonfuls of *Diapente*, or ſuch like, which is called *Horſe-Mithri-*

date, in a quart of ſtrong Ale. Uſe oft to perfume his head with Frankincenſe, and in the heat of Summer, uſe oft to ſwim him. Let a fat Horſe drink oft, and a little at once, and a lean Horſe whenſoever he hath appetite. Much rubbiug is comfortable, and cheareth every member. Be ſure to let your Horſe eate graſſe once in a year, for that cooleth the blood, ſcours away groſſe humours, and gives great ſtrength and nouriſhment to the body. If notwithſtanding all theſe principles, your Horſe fall into ſickneſſe and diſeaſe, then look into the Chapters following, and you ſhall find the trueſt, beſt approved, and the moſt familiar medicines for all manner of infirmities, that ever were known or publiſhed except my *Maſter-Piece*.

CHAP. II.

Of Riding in generall, and of the particular knowledges belonging to the Art of Riding of a great Horſe, or Horſe for ſervice, or Pleaſure.

HAving ſpoken ſomething already of horſes, it now followes, we ſay ſomething of the commendable exerciſe of riding great Horſes, which in the very action it ſelf ſpeaketh Gentleman to all that are performers or doers of the ſame. And though our Engliſh Gentry from a ſloath in their induſtry, aim for the moſt part at no more skill then the riding, of a ridden and perfect Horſe, which is but only the ſetting forth of another mans vertue, and thereby making themſelves richer in diſcourſe then action: yet our Engliſh Husbandman, or good-man whom I ſeek to make exact, and perfect in all things, ſhall not onely recreate himſelf by riding the horſes whom the other men have made perfect, but ſhall by his own practiſe bring his Horſe from utter ignorance, to the beſt skill that can be deſired in his motions: wherein he ſhall find a two-fold pleaſure, the one an excellent contentment to his mind, that he can perform ſo worthy an action, without the chargeable aſſiſtance of others, and the other a healthfull ſupport to his body, when by ſuch recreation, his ſpirits

The pleaſure of riding.

ſpirits and inward faculties are revived and inflamed.

But now me-thinks, I hear ſome ſay, that I have utterly taken away the tune of this ſtring, I have ſtricken ſo oft upon it, and that indeed there can be no delight where there is no variation: and that ſurely I cannot vary any more upon this plain Song, but the World would find diſcord either in this, or my former deſcants. But let them not deceive themſelves, for my building ſtandeth on a firm Rock, and I know both ſhall be worthily juſtifiable: only this I muſt inform all men, that in times paſt, long ſince, when our firſt rules of Horſemanſhip were given unto us, our Maſters were not ſo skilfull in the abilities of Horſe-performances as we are, but meaſur'd them by the proportions of their own weaker natures, and thence became ſo, too much tender over them, that they reſpected neither the greatneſſe of their own labours, nor the length of time before they arrived to their deſires, ſo in the end they might aſpire to their wiſhes with ſafety and full ſatisfaction: whence it came to paſſe, that in thoſe times, and even now in theſe, chiefly amongſt thoſe which are meerly Riders, and no Keepers, there is no leſſe time allowed to the making up of a perfect Horſe, then two years, when we know, and my ſelf from experience can juſtifie the ſame; that if the Rider can keep as well as Ride, that is, give as well directions for the preſervation of a Horſes health, and the avoidance of ſorances and ſickneſſe, as put in practice artfully, every violence to be uſed in his Leſſons, he may very well make up a perfect Horſe in three Months, fit either for pleaſure or battell, which is the full ſcope and end of this Treatiſe: wherein I would not have any man expect either new Rules; or contradiction of any already ſet down by men of practice, and knowledge in the Art, but only a ſtraightning or drawing of them together into a much narrower compaſſe, giving ſatisfaction to our deſires, and finiſhing up our work with ſpeed, which before was almoſt loſt or neglected, with the length of our labours, as you ſhall fully perceive by this diſcourſe which followeth. The Riders Apology.

Firſt, then to ſpeak of the taming of a young Colt, which is as it were the preface or introduction to the art of riding: You ſhall after he hath been in the houſe a weak or a fortnight, and is familiar with the man, and will withall patiently indure currying, The taming of a young Colt.

rying, combing, rubbing, clawing and handling in every part and member of his body, without any ſhew of rebellion or knaviſhneſſe, which you ſhall compaſſe by all gentle and eaſie means, doing nothing about him ſuddenly or raſhly, but with leiſure and moderation: then you ſhall offer him a ſaddle, which you ſhall ſet in the manger before him, that he may ſmell to it, & look upon it, and you ſhall gingle the girths and ſtirrops about his eare, to make him careleſſe of the noyſe, then withall gentleneſſe after you have rubb'd his ſides therewithall, you ſhall ſet it on his back, and gird it gently on, and then place his Crooper with all eaſe, which done, you ſhall take a ſweet watring trench, waſh't, and annointed with honey and ſalt, and put it into his mouth, placing it to hang directly about his tuſh, and as it were a little leaning thereupon: this you ſhall do in the morning as ſoon as you have dreſt him, and then thus ſaddled and bridled, you ſhall lead him forth, and water him in your hand abroad: then bringing him in, and after he hath ſtood a little reined upon his trench an hour or more, take away the bridle and ſaddle, and let him go to his meat till the Evening: then lead him forth as before with the ſaddle to the water, then when he is ſet up gently, take off his ſaddle and cheriſh him, and then dreſſe him, and cloath him up for all night.

His ſadling and bridling.

The firſt backing.

The next day ſaddle him and bridle him as before ſaid, and put on him a ſtrong muſrole of writhen Iron, or a ſharp Cavezan and Martingal, which you ſhall buckle at ſuch length, that he may no more but feel it when he jarketh up his head, and then lead him forth into ſome new plowed field, or ſoft ground; and there after you have made him trot a good ſpace about in your hand, and thereby taken away from him all his wantonneſs and knaviſh diſtractions, you ſhall offer your foot to the ſtirrop; at which if he ſhew any diſtaſte; either in body or countenance, you ſhall then courſe him about again: then offer again; and with leiſure riſe half way up, and go down again: at which if he ſhrink, correct him as before, but if he take it patiently, then cheriſh him, and ſo mount into the ſaddle, which done, after cheriſhing light down again, and give him bread or graſſe to eate: then look that your girths be well girted and ſtreight: that the Crooper be ſtrong and of juſt length, that the bridle hang even,

and

and in his due place, without inward or outward offence, that your ſtirrops be fit, and generally all things, without offence either to your ſelf or to the beaſt, and then as before, mount his back, ſeat your ſelf juſt and even in the ſaddle, make the reins of your bridle of equall length, carry your rod without offence to his eye in your right hand, the poynt either directly upright, or thwarted towards your left ſhoulder: Then having cheriſht him, let the Groom which before led him, having his hand on the chaff halter, lead him forward a dozen or twenty paces, then gently ſtraining your hand, with the help of the foot-man make him ſtand ſtill then cheriſh him, and lead him forward again, and do this five or ſix times one after a nother, till by continuall uſe, you make him of your own accord, (without the foot-mans help) by giving your body, and thruſting your leggs forward, go forward; which as ſoon as he doth, you ſhall ſtay him, and cheriſh him, and then ſitting on his back, let your foot-man lead him home, and bring him to the block, where after you have cheriſht him, you ſhall gently alight, and cauſe him to be ſet up, and well dreſt, and meated. The next day you ſhall bring him forth as before, and in all poynts, take his back, as aforeſaid, and ſo by the help of the foot-man, trot fore-right half a mile at leaſt; then let the foot-man lay off his hand, and walk by him, till you have of your ſelfe trotted him forth another half mile, then cheriſh him, and make the foot-man give him ſome graſſe or bread to eate, and then taking a large compaſſe, trot him home, and bring him to the block as before, and there alight, and ſo ſet him up.

The third day let your foot-man light upon ſome ſpare Jade, and then bringing your Colt to the block, take his back gently, and after you have cheriſht him, the other riding before you, follow him forth-right a mile, ever and anon at the end of twenty or thirty ſcore, ſtopping the Colt gently, cheriſhing him, and making him yield, and go back a ſtep or two, and then putting him forward again, till he be ſo perfect, that with the leaſt motion he will go forward, ſtop and retire, which will be effected in two dayes more; in which ſpace, if he chance at any time, to ſtrike or rebell, you ſhall make him which rides before you, take the ſpare reyn, and lead him forward; whilſt you give him two or three good laſhes under the belly, and then being in his way, take the

ſpare

ſpare reyn to your ſelfe again: and thus you ſhall do, till all faults be amended: then you ſhall ſpare your horſeman, or guide, and only by your ſelf for three or four dayes more, trot him every morning and afternoon, at leaſt a mile or two forward, uſing him only to ſtop or retire, and bringing him home a contrary way to that you went forth, till he be ſo perfect and willing, that he will take his way, how or in what manner your ſelfe pleaſeth, ever obſerving to mount and diſmount at the bloek only, except ſome ſpeciall occaſion conſtrain you to the contrary.

This you may very well bring to paſſe, the firſt week of the Horſes riding.

The three main points of a horſemans skill.

As ſoon as you ſee your Horſe will receive you to his back, trot forth-right, ſtop, and retire, and do all this with great patience and obedience; you ſhall then call into your mind the three main points of a Horſemans knowledge, which are helps, corrections, and cheriſhings. And for helps, they conſiſt in theſe: Firſt, the voyce, which ſoundeth ſharply and cheerfully, crying, *via*, *how*, *hey*, and ſuch like, adds a ſpirit and livelineſs to the Horſe, & lends a great help to all his motions: then the bridle, which reſtrained, or at liberty, helps him how to do, and ſhews which way to do.

Then the Rod which being only ſhewed, is a help to direct; being only moved, helps the quickneſſe and nimbleneſſe of the motion; and being gently toucht withall, helps the loftineſſe of a Horſes ſalts and leaps, and makes him as it were garher all his ſtrength into one point; and laſtly, the calves of the legges, ſtirrop Leathers, and ſtirrops, which moved by the horſes ſide, helps him to nimbleneſſe, ſwiftneſſe and readineſſe in turning. Some to theſe helps, adde the help of the Spur, chiefly in high ſalts or bovndings, but it muſt be done in a juſt and true time, and with ſuch gentle bitterneſſe, that the horſe may underſtand it for a help, or elſe he will take diſtaſte, and finding it favour like correction, inſtead of bettering his doings, do with more diſorder, as to ſpraule with his fore-feet in advancing, to yerk out with one or both his hinder feet in the corveit or bounding, ſhaking of his head and ſuch like, as will appear in practiſe.

Of Corrections and which they be.

Now of Corrections, the moſt principle is the ſpur, which muſt

muſt not at any time be given triflingly, or itchingly, but ſoundly and ſharply, as oft as juſt occaſion ſhall require: then the Rod which upon diſorder, ſloth, or miſcarriage of the members, muſt be given alſo ſoundly: then the voyce which being deliver'd ſharply and roughly, as *ha villian, carr dro, diable*, and ſuch like threatnings, terrifieth the horſe, and maketh him afraid to diſobey: and laſtly the bridle which now, and then ſtricken with a hard check in his mouth, reformeth many vices and diſtemperatures of his head: yet this laſt muſt be done ſeldome, & with great diſcretion, for to make a cuſtome thereof, is the ready way to ſpoyl a Horſes mouth.

Of cheriſhing

Now of Cheriſhings, there are generally in uſe but three, as firſt the voyce, which being delivered ſmoothly and lovingly, as crying, *ball a ſo by, ſo ſo by the e*, and ſuch like, gives the horſe both a cheerfulneſſe of ſpirit, and a knowledge that hee hath done well; then the hand by clapping him gently on the neck or buttock, or giving him graſs, or other food to eat, after he hath pleaſed you: and laſtly the big end of the Rod, by rubbing him therewith upon the withers or maine, which is very pleaſing and delightfull to the horſe.

Of the Muſrole and Martingale.

Now after theſe ordinary and uſuall helps, corrections, and cheriſhings, you ſhall have reſpect to the Mutrole or Cavezan and Martingale, which carry in them all the three former both ſeverall and unite, for it is firſt an eſpeciall help and guide to every well diſpoſed horſe, for ſetting of his head in a true place, forming of his Reine, and making him appear comely and gallant in the eyes of the beholders; then it is a ſharp correction when a Horſe yerketh out his noſe, or diſordereth his head any way or ſtriveth to plunge or run away with his Rider: And laſtly it is a great cheriſhing unto the Beaſt, when he yeeldeth his head to your hand, by ſhrinking from his face, and ſo leaving any more to torment him, but when he offendeth: whence it comes that more from this than any thing elſe, the Horſe firſt gaineth the knowledge of his Maſters will, and is deſirous to performe it: therefore you ſhall be very carefull to the placing of this upon the Horſe; as firſt, that it hang ſomewhat low, and reſt upon the tender Griſſel of the Horſes noſe, whereby the corrections may be the ſharper when occaſion require it; then that it be looſe

and not ſtraight; whereby the Horſe may feel, upon the yielding in of his head how the offence goeth from him, and ſo know that only his own diſorder is his own puniſhment. Laſtly, he ſhall be carefull to note how he winneth the Horſes head, and by thoſe degrees to draw his Martingale ſtraiter and ſtraiter, ſo as the Horſe may ever have a gentle feeling of the ſame, and no more; till his Head and Rein be brought to that perfection that you deſire, and then there to ſtay, and keep the Martingale conſtantly in that place only, which you ſhall performe in thoſe few dayes which you trot your Horſe forth right, being before you bring him to any Leſſon, more then the knowledge of your ſelf, and how to receive you to his back, and trot forth obediently with you.

Of treading the large ring.

When your Horſe is brought unto ſome certainty of Reine, will trot forth-right with you at your pleaſure, & by your former exerciſe therein is brought to breath and delight in his travell, *which will grow and encreaſe upon him, as you grow and encreaſe in your labour*, then you ſhall bring him to the treading forth of the large Rings in this manner: Firſt, *if he be of heavy and ſluggiſh nature, ſloathfull and dull, and, albeit he have ſtrength and ſufficiency of body, yet you find him ſlovenly & unapt, then you ſhal trot him in ſome new plowed field, ſoft and deep: But if he be of quick and of fiery ſpirit, apt, nimble, & ready to learn, then you ſhall trot him in ſome ſandy or gravelly place, where is ſtrong and firm foot hold, and there you ſhall mark out a ſpacious large Ring, at leaſt threeſcore or fourſcore paces in compaſſe*, and having walked him ſix or ſeven times about the ſame on your right hand, you ſhall then by a little ſtraitning of your right Reine, and laying the calfe of your left legge to his ſide making a half circle within your Ring upon your right hand, down to the center or mid-poynt thereof, and then by ſtraitning your left Reine a little, and laying the calf of your right leggge to his ſide, making another half circle to your left hand from the center to the outmoſt verge, which two half circles contrary turned, will make a perfect Roman S. within the Ring; then keeping your firſt large circumference, walk your horſe about on your left hand, as oft as you did on your right, and then change within your Ring as you did before to your right hand again, and then trot him firſt

Choice of ground.

on

on the right hand, then on the left, ſo long as you ſhall think convenient, and although our ancient Maſters in this Art have preſcribed unto us certain numbers of Ring turnes, and how oft it is meet to go about on either hand, as if all Horſes were of one even ability; yet I would wiſh you to neglect thoſe Rules, and only to practiſe your Horſe in this Leſſon, according to his ſtrength of his body, ſometimes applying him therein an hour, ſometimes two, and ſometimes three, more or leſſe according to your diſcretion: for the ſpace of time can neither bring wearineſſe nor tyring: and for your change of hands, you ſhall do it as oft as ſhall ſeem beſt to your ſelfe, being ever very carefull to give him the moſt exerciſe and that hand, on which he is ever moſt unwilling to go; and in this leſſon be careſull alſo that he do it cheerfully, luſtily, nimbly, quickning and inflaming his ſpirits by all the meanes poſſible, and when you find that he will trot his large rings perfectly, which will queſtionleſſe be in leſſe then a weeks ſpace, being well applyed therein, for you muſt not force ſlow any morning except the Sabbath, hardly any afternoon alſo, if you find him loathfull and heavy, for there is no greater hinderance then the Riders too much tenderneſſe, nor no greater furtherance then a continuall moderate exerciſe. Therefore as I ſaid when he will trot his Rings well, then in the ſame manner, and with the ſame changes, you ſhall make him gallop the ſame Rings, which he ſhall do alſo with great dexterity, lightneſſe, and much nimbleneſſe, without loſing the leaſt part or grace of his beſt reine: Nay, ſo careſull you ſhall be thereof, that in this gallopping, you ſhall, as it were gather his body together, and make his Reine rather better then it was, and make him take up his feet ſo truly and loftily, that not any eye may ſee or perceive a falſhood in his ſtroke, but that his inward feet play before his outward, and each of a ſide follow the other ſo directly, that his gallop may appear as the beſt grace of all his motions: neither ſhall you enter him into this leſſon raſhly and haſtily, but ſoberly, and with diſcretion, making him firſt gallop a quarter of the Ring, then half, then three parts, and laſtly the whole Ring: neither ſhall you force him into his Ring with violence or the ſharpneſſe of ſpurs, but with ſpirit and mettall, making him by the lightneſſe and cheerfulneſſe of your own body,

Of galloping large Rings.

passe of his own accord into his gallop, and especially in his changes, where you may let him feel your Legge, and shew him your Rod on the contrary side: and herein is to be noted, that continually those changes (in as much as they are made in a much straighter compass) must be done ever with great quicknesse, and more stirring nimblenesse then in the lessons.

Helps in the large Rings.

Now for the helps necessary in these large Ring-turnes, they consist generally in the *Voice*, *Rod*, *Calves* of your Legs, and the *Bridle*: In the *Voice* by quickning him up, and reviving his spirits when he grows loathfull, with these words, *How, hey*, or *via*: In the *Rod*, by shewing it him on the contrary side, or laying it on the contrary shoulder, and sometimes by shaking it over his head, which is a kind of threatning, chiefly when you make your changes. In the calves of your legs, when you clap them hard to the contrary side to which he turneth, or by springing and jerking your leggs forward, hard upon your stirrop leathers, which will quicken him and make him gather up his limbs better than the spur by many degrees: And lastly, in the bridle, by drawing it in a little straiter, and holding it with some more constancy, when you put any of your former helps in use, or doe any thing with more life or courage, for that maketh him draw his limbs together, and so straiten his Rings with gracely comlinesse.

Corrections in the Ring turns.

For the Corrections in these large Rings, they be divers; as namely, the Bridle, the Spur, and the Rod, and sometimes the voyce, yet that but seldome; for the bridle, you shall correct your Horse therewith if he carry his head or chaps awry, making as it were mouths and ill-favoured countenances, giving him now and then a little check in the mouth, and awaking him from such forgetfull passions, or now and then drawing the wrench to and fro in his mouth, which will reform the errour: then the spur, which must be laid sharp and hard to his sides, when you find your helps will do no good, but that his sloath rather more and more increaseth, or when he presseth and hangeth hard upon your hand or looseth the tutch of his rein, or such like vices; for the Rod, when you find that he neglecteth the shewing or shaking of it, or when he disordereth any of his hinder parts, and will not gather them up comely together; then you shall therewith give him a sound lash or two under the belly, or over the contrary shoulder, and to any of these former Corrections you

you ſhall ever accompany the threatning of your voyce, when the fault is too much foule, and no otherwiſe, becauſe there ſhould be ever an entire love betwixt the Horſe and the Horſe-man, which continually chiding will either take away or at leaſt root out the apprehenſion thereof.

Cheriſhings in his Ring.

Now for your Cheriſhings, they are thoſe which I formerly ſpake of; only they muſt be uſed at no time but when your Horſe doth well, and hath pleaſed your mind, both with his cunning and tractableneſſe: and although the time for the ſame be when he hath finiſh'd his leſſons, yet there is a ſecret pleaſing and cheriſhing of a Horſe with the bridle, which muſt be exerciſed in the doing of his Leſſons, and that is the ſweetning of his mouth by a little ceaſing of your bridle hand, and gently drawing it up back again, letting it come and go with ſuch an unperceiving motion, that none but the beaſt may know it.

Of ſtopping and going back.

When your Horſe can trot and gallop your large Rings with all perfectneſſe, which with good induſtry will be perfected in leſs than a fortnights exerciſe, you ſhall then proceed to make him ſtop fair, comely, and without danger, which you ſhall do in this manner: Firſt, as ſoon as you have taken his back, cheriſh him, put him gently forward, and bring him into a ſwift trot: after you have trotted him forty or threeſcore yards forward, you ſhall by drawing in your bridle hand ſtraitly and ſuddenly, make him gather his hinder leggs and fore-legges together, and ſo in an inſtant ſtand ſtill, which as ſoon as he doth immediately you ſhall eaſe your hand a little, yet not ſo much as may give him liberty to preſs forward, but rather to yeeld backward which if you find he doth, you ſhall give him more liberty, and cheriſh him, and then having pauſed a while, draw in your bridle-hand, and make him go back two or three paces, at which if he ſtrike, inſtantly eaſe your hand, and draw it up again, letting him come and goe till hee yeeld and go backward, which (for the moſt part) all horſes at the firſt will do: but if it be that your horſe rebell and will not go back with this gentle admonition, you ſhall then cauſe a foot-man ſtanding by to put him back with his hand, and in this motion you ſhall cheriſh him, that he may underſtand what your will is: and thus every time you make him ſtop, you ſhall make him retire back, till in one ſpace of time you have made both Leſſons perfect: and this practiſe you ſhall uſe both till you

come

come to your large Rings, and at every time that you finish your leſſon, or give the Horſe breath or eaſe; whereby you ſhall perceive that your Horſe ſhall learn to trot and gallop the large Rings, to ſtop and retire back all in one ſpace of time, becauſe you ſee ſucceſſively they follow one another, and are to be done (though three) but as one intire leſſon.

Helps. Now for the helps in theſe Leſſons, the beſt for ſtopping is the choice of ground, as by making your Horſe ever to ſtop down the ſloap of ſome hill, or deſcending ground, whereby he may be compell'd to couch his hinder loyns the better, and ſo make him ſtop moſt comely, and to obſerve that the ground be firme and hard, without danger of ſliding, leſt the Horſe finding ſuch an imperfection, grow fearfull, and ſo refuſe to do your will out of his own danger. In retiring you ſhall helpe him with your rod, by putting it before his breaſt, or ſhaking it before his knees, to make him remove his feet more quick and nimbly.

Corrections For corrections in ſtopping, it muſt ſometimes be done by your ſelf, as with the even ſtroke of your ſpurs, when in his ſtop he diſordered his head, or with any one ſingle ſpurre, when he caſteth out his hinder loynes, and will not ſtop right in an even line: and ſometimes it muſt be done by another by-ſtander, where he refuſeth to ſtop at all, who ſtanding at the place of ſtop, as ſoon as you draw up your hand, ſhall with his rod threaten the Horſe and make him not dare to preſs forward, or, if he doe preſſe forward, to make him retire ſwiftly back ſo much ground as he gained, both your ſelf and the by ſtander, rating him with your voices extreamly: for corrections in retiring, they are the even ſtrokes of both your ſpurs, when hee ſticks, or preſſes upon your hand, and will not yeeld back; and alſo your rod ſtruck ſharply on his knees and breaſt, and the rod of a by-ſtander ſtruck upon his breaſt, knees, and face, when his ſtubbornneſſe is too violent.

Cheriſhings. But for his cheriſhings, they be all formerly ſpoke of, when your will is comely and obediently performed; beſides the addition of ſome other, as a preſent eaſing of your bridle hand, and the ſuffering and cheriſhing of the by-ſtander, and ſo offering him to ſtand and recover breath a good ſpace after.

When

When your horſe can ſtop and retire well, which may be done in the ſame ſpace that you teach him in his large Ring turnes, for it is as it were three leſſons learn'd in one; you ſhall then teach him to advance before when he ſtoopeth, which is very comely and gracefull to the beholders; and you ſhall do it in this manner: After you have ſtopped your Horſe, without giving your hand any eaſe, you ſhall lay the calves of both your leggs hard to his ſides, and adde thereto the noiſe of the ſhaking of your Rod, and your voyce, by crying *up, up*, which will at firſt (peradventure) but a little amaze him, becauſe he underſtandeth not your meaning: Therefore you ſhall put him forward againe, and do as before, and that with a little more ſtrength, continuing the practiſe of the ſame till you perceive hee taketh one foote from the earth, then cheriſh him a little, and ſo to the leſſons again, till hee taketh up both his leggs from the ground, which when he doth, orderly or diſorderly, yet cheriſh him exceedingly, that he may come to the knowledge of your meaning, without which all your labour is loſt; then to your former practiſe again, till you have brought him to that perfectneſſe, that he will with all readineſſe: advance as oft as you will give him the calves of your legs to his ſides, be it leſſe or more times together: this done, you ſhall look to the orderly and comlineſſe of his advancing: As firſt, that he takes up his legs both even together, and bend them inward towards his body; then that he advance not too high (for fear of comming over upon you) but couch his hinder loynes cloſe to the ground; then that he ſprauleth not, nor paweth with his feet forward; and laſtly that hee advance not for his owne pleaſure, but when you command him by your own direct and orderly motions, for the contrary is a foul faulte in Horſemanſhip. Of advancing before.

For helps in this Leſſon, they are the calves of your legges the ſhakig of your Rod over his head, and your voyce, as is before ſaid: and the deſcent of ſome hanging ground, which will make his hinder loyns couch the better. Helps.

The Corrections are according to the nature of offences, as the even ſtrok of yours ſpurs; or a good laſh with your Rod, when you ſee hee fixeth his feet to the ground, and ſtubbornly applyes himſelfe to diſobey you, or will take up his feet one after another, Corrections.

ther, and not both together. If he do advance too high, ſo as he is ready to come over upon you, or if hee ſpraule or paw forth with his feet, you ſhall not then only give him both your ſpurs hard together, but alſo a good jerke or two with your Rod betweene his eares: but if he advance when you would not have him, you ſhall then in the ſame inſtant jerke him over both the knees with your Rod; and if he advance again, jerk him again, not ceaſing till he fix his feet to the ground, or go backward, and then cheriſh him.

Cheriſhings. For particular cheriſhings in this Leſſon, they are no other than thoſe former ſpoke of, onely they muſt be done with a more ready watchfulneſſe, in the very inſtant and moment of time, in which he performeth any thing well, that the Horſe may underſtand why, and wherefore he receiveth ſuch contentment, and thereby be incouraged to continue in his goodneſſe, and be more ready to apprehend his Riders pleaſure.

The uſe of advancing. For the uſe of advancing, it is two fold: as namely, to give a grace to his other Leſſons, and to bring his body to nimbleneſſe: yet for the moſt part it is only us'd at the ſtop; where when you have finiſh'd any Leſſon, if then concluding with the ſtop, you make him advance, once, twice, or thrice, it will be both a grace to the beaſt, and ſhew much art in the Horſeman; alſo it maketh a Horſe apt and ready to turn well, and making him truſt to his hinder legges, whereby his fore parts may be directed and governed at the Horſemans pleaſure.

Of yerking behind. Next to advancing, you ſhall teach your Horſe to yerke behind, in this manner: When at any time you have made him ſtop, you ſhall preſently with your Rod give him a good jerk under the belly neare to his flanke, which though at the firſt hee apprehended not, yet by a continuall and conſtant uſe thereof you ſhall in the end bring him to yerk out his hinder legs; at the firſt doing whereof, you ſhall cheriſh him, for that is the onely language by which he knoweth he doth your will, and then having paſſed a little, make him to do it again, encreaſing it every day, and doubling his doings till he be ſo ready, that when you pleaſe to give the jerke, he will then give the yerke, and then you ſhall look to the comelineſſe of his doings, that is to ſay, that he yerk not out his hinder legges, till his fore-legges be above the ground

ground, then that he yerk not one leg farther out then the other, but both even together; then that he yerk not too high, and laſtly, that he yerk not one leg out whileſt the other is on the ground, all which are errours of great groſneſſe. Therefore to make the horſe more perfect in this leſſon, it ſhall be good to teach him to yerk out behind, when he ſtandeth in the ſtable, by jerking him on the buttocks with your rod, and not ceaſing to moleſt him till he raiſe up his rump above the ground, and then to cheriſh him, and ſo to apply him without any eaſe and reſt, till he do your will; then when he is perfect to put the ſame in practiſe when you are in the field on his back, by turning your rod in your hand to his buttock-ward, and touching him therewith, to make him yerk as aforeſaid.

For the helps, they are the conſtant ſtaying his mouth on the bridle, the ſtroke of your rod under his belly, or the gentle touching him upon the rump of the ſame. Helps.

The corrections are onely the even ſtroak of your Spurs, when either he refuſeth to yerk, or yerketh out diſorderly, or out of malice; or the ſingle Spur on that ſide on which he yerketh out moſt diſorderly: and laſtly, a reſtleſſe holding of him to the leſſon, not giving him any reſt or eaſe, till he do it in that manner which you can wiſh. Corrections.

Then for his cheriſhings, they are all thoſe formerly mentioned, being beſtowed upon him in the very inſtant of his well doing. Cheriſhings.

When your horſe is perfect, in all the leſſons formerly ſpoke of, and underſtandeth the helps and corrections belonging to the ſame, you ſhall then teach him to turn readily on both hands, by ſtraitning his large rings, and bringing them into a much leſſe compaſſe, and although amongſt Horſe-men, and in the Art of Horſemanſhip, there are divers and ſundry turns, ſome high and lofty as the turn upon the *Corvet*, *Capriole*, or on bounds, ſome cloſe and near the ground, as the turn *Tarra*, *Tarra*, or theſe we call *Caragole*, *Serpeigiare*, and ſuch like, and ſome ſwift and flying, as the *Incavellare*, *Chambetta*, and ſuch like; yet ſith they all labour but to one end, which is to bring an horſe to an exact ſwiftneſſe and readineſſe in turning, I will in as brief and plain manner as I can ſhew you how to compaſſe the ſame. Firſt, therefore, you ſhall make out a ring ſome three or four yards in com- Of turning.

paſſe, and in the ſame, with all gentleneſſe a while; walk your horſe, ſuffering him to go the ſame at his own pleaſure, gathering his head up by little and little, and making him take pleaſure in the ſame, till you find that he taketh knowledge of the Ring, and will with all willingneſſe make about the ſame, coveting rather to ſtraiten it, than inlarge it: which perceived, you ſhall then carry your bridle hand conſtant and ſomewhat ſtrait, yet the outmoſt reyn ever ſomewhat more ſtrait than the inmoſt, making the horſe rather look from the Ring than into the Ring, and the calve of your leg, (as occaſion ſhall ſerve) ſomewhat neer to the outward ſide of the horſe, and then you ſhall trot him about the ring, firſt on the one ſide, and then on the other, making your changes within that ſtrait ring, as you did before within the large ring.

And in this ſort without ceaſing, you ſhall exerciſe your Horſe a full hour together, then ſtop him, make him advance twice or thrice together, then retire in an even Line, and ſo ſtand ſtill a pretty while, and cheriſh him; then when he hath taken freſh breath, to him again, and do as before, continually labouring by raiſing up his bridle-hand, and thruſting forward your Legs and body, to bring his trot to all the ſwiftneſſe, and loftineſſe that may be, and your in changes to do them ſo readily, and roundly as may be: alſo, making him to lap his outmoſt leg ſo much over his inmoſt leg, that he may cover it more then a foot over, and thus you ſhall exerciſe him a whole forenoon at leaſt a weak together, only doing his former leſſons but once over in a morning and no more, and in this practiſe you teach him perfectly three leſſons together, that is the turn *Terra, Terra*, the *Incavalare* and the *Chambetta*: the turn *Terra, Terra*, in the outmoſt circle of the ſtrait Ring, and the *Incavalare* and *Chambetta* in the changes, wherein he is forc'd to lap one leg over another, or elſe to liſt up the inmoſt legge from the ground, while he brings the outmoſt over it: & ſurely in this Ring & theſe changes, conſiſteth all the main Art of turning, and the chiefeſt glory both of the horſe and the horſe-man: and therefore it is meet for every Rider to think this leſſon never perfectly learnt, and therefore continually to practiſe his horſe in the ſame, making him not onely tread and trot theſe narrow rings, but alſo gallop them, and from

galloping them to paſſe them about in ground-ſalts, as by taking up his fore-legs from the ground both together, and bringing his hinder feet into their place, and ſo paſſing the Ring about once or twice or thrice, at your pleaſure; or as oft as the horſes ſtrength and courage will allow: and this is the true turn, called *Terra*, *Terra*, and of greateſt requeſt with Horſe-men, and likewiſe with Souldiers; and this *will every horſe naturally and eaſily be brought unto: only by a continuall trotting and galloping of theſe narrow Rings. Thus you ſee the perfectneſſe of your large Rings, brings your Horſe to an eaſie uſe of the ſtrait Rings; and the eaſie knowledge of the ſtrait Rings brings a Horſe to the perfection of turning, which is the ground and maine ſumme of this Art, a ſtopping begets retiring, and retiring advancing. Thus every Leſſons as it were a chain, is link't one to another.*

The helps belonging to turning, are all whatſoever are formerly ſpoken of becauſe it is a Leſſon, *which beſides that it containeth in it ſelfe all other Leſſons, ſo it muſt be done with more courage, Art, and nimblenеſſe, then any elſe whatſoever*; and therefore the Horſe had need of all the aſſiſtance that can poſſibly be given him. Helps.

The corrections are the ſpurs given on the utmoſt ſide, when the Horſe ſticks, and is harder to come about on the one ſide, then on the other, and the Rod ſtriken hard on the outmoſt ſide of the offending member, as alſo a continuall labour, when the Horſe ſhewes either unwillingneſſe or diſobedience: touching the unnimbleneſſe of his turning, when he beats one leg againſt another, or treads one foot upon another, the raps and hurts he doth himſelfe, are ſufficient corrections; and will both make him know his fault and amend it. Corrections.

For his cheriſhings, they are alſo the former already ſpoken of, *yet to be uſed (if poſſibly) with greater earneſtneſſe, in as much as this Leſſon being moſt cunning; would for the performance thereof ever receive the moſt comfort.* Cheriſhings.

Your Horſe being brought to this perfection, that hee will perfectly tread his large rings, ſtop, retire, advance before, yerk behind, and turn readily on either hand, you ſhall then take away his muſrole and trench, and in ſtead thereof put upon his head a gentle Covezan or two joynts and three peeces, with a

chap-band underneath, which you ſhall buckle cloſe, but not ſtreight, and be ſure that the cavezan lye upon the tender griſſel of the horſes noſe, ſomewhat near to the upper part of his noſtrils; then to the chap-band you ſhall faſten the Martingale, and laſtly to the rings on each ſide the cavezan, you ſhall faſten long divided reins, more then a yard and a half in length a piece, then into his mouth you ſhall put a ſweet ſmooth cannon bit, with a plain watering chain, the cheek being of large ſize, ſo as it may arm a little above the point of his ſhoulder; and the kirble ſhall be thick, round, and large, hanging looſely upon his nether lip, and inticing the horſe with his lip to play with the ſame. Thus armed you ſhall take his back, and caſting the left reine of your cavezan over the horſes right ſhoulder, you ſhall bear it with your thumb, with the reins of the bit in your left hand; and the right reins of the cavezan you ſhall caſt over the horſes left ſhoulder, and bear it with your rod in your right hand, and ſo trot him forth the firſt morning out right a mile or two in the high-way, making him onely feel and grow acquainted with the bit, and onely making him now and then ſtop and retire, and gathering up his head in a due place, and faſhioning his rein with all the beauty and comelineſſe that may be, which done, the next day you ſhall bring him to his large rings, and as was before ſhewed, there make him perfect with the bit as you did with the ſnaffle: firſt in trotting, then in gallopping of the ſame, then make him ſtop, retire, advance, yerk behind, and come upon their hand with a great deal more perfectneſſe, and more grace then was formerly done with the trench, which is an eaſie labour, in as much as the bit is of much better command, and brings more comelineſſe to the horſes motions, is alſo a greater help, a ſharper correction, and a cheriſher of more comfort then any before uſed. And thus in the firſt moneth you may make any horſe perfect upon the trene in the leſſons before ſpoke of, ſo in the ſecond moneth you may make the ſame leſſons a great deal more perfect upon the bit, and ſo preſume in two moneths to have a perfect ground horſe, fit either for Souldier or Schollar, that hath any good rules of horſman-ſhip in him.

Of the turning Poſt.

Now for as much as the Art in turning in horſes is of great difficulty, and ought of all Leſſons to be moſt elaborate, I will ſpeak

ſpeak a little further thereof, and ſhew you the practiſe of theſe preſent times, for the beſt accompliſhment of the ſame, without ſtirring up evil motions in the horſe, whence Reſtiveneſſe, and other vild errours do grow; for it is certain that every horſe naturally deſireth neither offence, nor to offend; but the raſh diſcretion of ignorant horſmen, which will compell a horſe to do, before he know what, or how to do, is the begetting of thoſe evils which are hardly or ever reclaimed: for a horſe is like an ill brought up boy, who having learnt drunkenneſſe in his youth, will hardly be ſober in his age, and having once got a knaviſh quality, though he be never ſo much puniſhed for the ſame, will yet now and then ſhew that the remembrance is not utterly extinguiſhed; and for as much as in this Leſſon of ſtrait turns, there is ſo much curious hardneſſe that a horſe is moſt ſubject to rebell, and learn many evils thereby, therefore to prevent all thoſe evils, you ſhall cauſe a ſmooth ſtrong poſt to be well ram'd, and fixed in the earth in the midſt of the ſtrait ring, at the very point and center thereof, then cauſing a foot-man to ſtand at the poſt, you ſhall give him the right rein of your cavezan, which you ſhall make him hold about the poſt, and ſo walk or trot your horſe about the ſame on your right hand as long as you pleaſe, then taking up the right rein, give him up the left rein, and do as much upon the left hand, and thus change from hand to hand; as oft as you ſhall think convenient, till you have brought your horſe to the abſolute perfection of every turn, the poſt being ſuch a guide and bond unto the horſe, that albeit the horſman were of himſelf utterly ignorant, yet it is impoſſible the horſe ſhould either diſorder or diſobey the Riders purpoſe.

When your horſe can thus perfectly ſet every ſeverall turn either ſtrait, or open with his bit, you ſhall then teach him to manage, which is the onely poſture for the uſe of the ſword on horſeback, and you ſhall do it in this manner: Firſt, cauſe ſome by-ſtander to prick up in the earth two riding rods, about twenty or forty yards or more, as you think good, diſtant one from the other; then walk your horſe in a ſtraight turn or ring about the firſt on your right hand, and ſo paſſing him in an even furrow down to the other Rod, walk about it alſo in a nar- Of manging.

row

row Ring on your left hand, then thruſt him into a gentle gallow down the even furrow, till you come to the firſt Rod, and there making him (as it were) ſtop, and advance without any pauſe or intermiſſion of time, thruſt him forward again, beat the turn *Terra, Terra*, about it on your right hand, then gallop forth right to the other Rod, and in the ſame manner beat the turn about on your left hand; and thus do as oft as you ſhall think it convenient for your own practice and the horſes ſtrength.

Diverſities of Manages.

Now of theſe manages, our ancient Maſters in Horſe-manſhip have made divers kinds, as manage with reſt, and manage without reſt, manage with ſingle turns, and manage with double turns, which indeed doth rather breed confuſion, than underſtanding in either the Horſe or Horſeman: Therefore for your better knowledge, I will reduce them only but to two kinds, that is manage open, and manage cloſe: your open manage is that which I ſhewed you before, when you turn *Terra, Terra*, which is the moſt open of all ſtrait turns: and your cloſe manage is when you turn upon the *Incavalare*, or *Chambetta*, which are the cloſeſt of all turns, and may be done as before I ſhewed in a flying manner, even upon one foot, which although it be artfull, yet it is not ſo glorious and ſafe for the Souldiers practice, only, this you may be moſt aſſured of, that when a Horſe can manage upon both theſe turns, he may manage without more inſtruction, upon any other turn whatſoever.

Of the carere.

When your Horſe is perfect in the manages before ſaid, you may then paſſe a *career*, at your pleaſure, which is to run your Horſe forth-right at his full ſpeed, and then making him ſtop quickly, ſuddenly, firme, and cloſe on his buttock: in which leſſon there needeth little inſtructions, but onely ſome few obſervations, as firſt, that you make not your *career* too long, whereby the Horſe may be weakened; or too ſhort, whereby his true wind and courage may be undiſcover'd, but competent and indifferent, as about four or fiveſcore yards at the moſt: then that you ſtart him gently without a fright: and laſtly, that you firſt give him a little warning with your bridle-hand, and then ſtop him firmly and ſtrongly; which place of ſtop, if it be a little bending downwards, it is a great deal the better. And thus in theſe leſſons already ſhewed you, conſiſteth all the full perfection

fection of a horſe for ſervice in the Warres, which any painfull man may bring his horſe well unto, in leſſe then three months: how ever our Ancients in former times have been blind, and in the ſame practice, have waſted two years, ere they brought it to perfection.

Now foraſmuch as to the Art of riding, belongeth divers other ſalts and leaps, right pleaſant and curious to behold; and though not generally uſed in the wars, yet not utterly uſeleſſe for the ſame; and ſith, they are many times very needfull for the health of mans body, I will by no means abridge our Engliſh Husband-man of the ſame, but proceed to the leſſons, which are meet for horſes of pleaſure, of which the firſt, is to make a horſe bound aloft with all his four feet from the ground, and you ſhall do it in this manner: When you have trotted your horſe forthright a dozen or twenty yards, you ſhall ſtop him, and when he hath advanced once or twice, you ſhall a little ſtraiten your bridle-hand, and then give him the even ſtroke of both your ſpurs together hard, which at firſt will but only quicken and amaze him, but doing it again and again, it will breed other thoughts in him, and he being of ſpirit and mettall; (as it is loſt labour to offer to teach a Jade ſuch motions) he will preſently gather up his body, and either riſe little or much from the ground, then preſently cheriſh him, and after ſome reſt, offer him the like again, and thus do till you have made him bound twice or thrice, then make much of him, and do no more for that day; the next day renew his Leſſon again, and double his exerciſe, increaſing ſo day by day, till he come to that perfectneſſe, that he will bound whenſoever your Spurs ſhall command him.

Horſes for pleaſure.

Of bounding aloft.

When your horſe can bound perfectly, then you ſhall teach him the Corvet in this manner: You ſhall at the corner where two walls joyn together, a little hollow the ground a horſes length or more, and then place a ſmooth ſtrong poſt by the ſide of the hollowneſſe of a horſes length likewiſe from the wall; then over againſt the poſt, faſten an Iron Ring in the wall; this done, ride your horſe into the hollow place, and faſten one of the reins of the Cavezan unto the Ring, and the other about the poſt, then after you have cheriſhed your horſe, make him advance

Of the Corvet.

advance, by the help of your calves of your legs onely twice or thrice together; then let him ſtand ſtill, and cheriſh him, then make him to advance again at leaſt a dozen times together, then reſt, and after advance twenty or forty times together, dayly increaſing his advancings as he grows perfect therein, till you perceive that he hath got ſuch a habit therein that he will by no means preſſe forward, but keeping his ground certain, advance both before and behinde of an equal height, and keep one juſt and certain time with the motion of your legs, neither doing ſlower nor faſter, but all after one manner and leaſure: but if you finde that he doth not raiſe his hinder parts high enough, then you ſhall cauſe a footman to ſtand by you, and as you make him advance before, ſo the footman by jerking him gently upon his hinder fillets with his rod to raiſe up his hinder parts alſo; this will bring your horſe in few dayes to a perfect and brave Corvet, ſo that after you may do it in any place where you pleaſe without the help either of wall or poſt, or other byſtander.

Of the gallop Galliard.

When your horſe is made perfect in the Corvet, and that he will do it readily and comely, you ſhall at the end of every third or fourth advancing, give him the ſtroak of your Spurs, and make him bound aloft; then put him to his Corvet again as before, and then make him bound again; and thus at the end of every third advancing, ſee you make him bound for the length of a tilt bar, or an ordinary managing furrow, according to the horſes ſtrength, and this is called the *gallop galliard*, which if it be taught a horſe along by the ſide of ſome wall or ſmooth pale, it is ſo much the better, and a great deal fewer diſorders will riſe and trouble the Rider.

Of the Capriole.

The next leſſon you ſhall teach your horſe after the gallop galliard, is the *Capriole*, or Goats leap, which is the ſame manner of motion which the Corvet is, onely it is to be done forward, and much ground gained in the ſalt, and the horſe is to raiſe his hinder parts as high, or rather higher then his fore-parts, and to keep rather a ſwifter then ſlower time in doing of it; therefore when you teach your horſe to do it, you ſhall bring him into ſome hollow furrow, where the ground is a little deſcending, and turning his head to the deſcent, put him into the Corvet temperate and gently, then when you give him the calves of your legs

leggs to raiſe up his fore parts, in the ſame inſtant jerk your legge violently forward again, that he may not ſtick, but carry his hinder-leggs after his fore-leggs, and let ſome skilfull foot-man ſtanding by your ſide, jerk the horſe over the fillets with his rod, and make him raiſe up his hinder parts; and thus do without ceaſing, till he perform your will nimbly and cunningly, and then forget not to cheriſh him, and give him all comfort poſſible. And this leſſon and the other which conſiſt of violent and quick ſalts or leaps, would ever be practiſed the firſt in the morning whilſt a Horſe is freſh and luſty, for to put him to them after his fire-edge is taken away, will but bring him to a loathing of his inſtruction, or at beſt to do them but ſlovenly, heavily, and unwillingly.

There is alſo another motion which is pleaſing to the eye, though it be very labourſome to the body, which is to make a Horſe go ſide-long of which hand ſoever the Rider is diſpoſed, and is very neceſſary in the warres, becauſe it is the avoiding of any blow comming from the Enemy. This motion when you intend to teach your Horſe, you ſhall draw up your bridle hand ſomewhat ſtrait, and if you determine to have him goe aſide to your right hand, lay your left Rein cloſe to his neck, and the calve of your left legge cloſe to his ſide, and as you did in the *Incavalare*, making him lap or put his left legge over his Right, then turning your Rod backward, and jerking him gently on the left hinder thigh, make him bring his hinder parts to the Right ſide alſo, and ſtand in an even line as at the firſt, then make him remove his fore-parts more then before, ſo that he may ſtand, as it were, croſs over the even line, and then make him bring his hinder parts after, and ſtand in an even line again; and thus do, till by long practice he will move his fore parts and hinder parts both together, and goe ſide-long as farre as you pleaſe. then cheriſh him, and if you will have him go towards your left hand, do as you did before, uſing all your helps and corrections on the right ſide onely. And thus much I think is ſufficient to have ſpoke touching all the ſeverall Leſſons meet to be taught to any Horſe whatſoever, whether he be for ſervice or for pleaſure, and which being performed artificially, carefully, and with patience, you may preſume your Horſe is compleat and perfect,

Of going aſſide.

perfect, the rather ſith no man can find out any invention, or teach any other motion to a Horſe, which may be good and comely, but you ſhall eaſily perceive, that they are received from ſome one of theſe already rehearſed.

Riding before a Prince.

Now if you ſhall be called to Ride before a Prince, you muſt not obſerve the liberty of your own will; but the ſtate of the perſon before whom you Ride, and the grace of the Horſe which you ride; and therefore being come into the riding place, you ſhall chuſe your ground, ſo that the Perſon before whom you are to ride may ſtand in the midſt thereof, ſo as he may well behold both the paſſage of the Horſe to him and from him: then being ſeated in a comly order, and every ornament about you handſome and decent, you ſhall put your Horſe gently forth into a comely trot, and being come againſt the Perſon of ſtate, bow your body down to the creſt of your Horſe, then raiſing your ſelfe again, paſs half a ſcore yards beyond him, and there marking out a *narrow Ring*, thruſt your Horſe into a gentle gallop, and give him two or three managing turnes, in as ſhort ground as may be, to ſhew his nimbleneſſe and readineſſe: then upon the laſt turn, his face being toward the great perſon, ſtop him comely and cloſe, and make him to advance twice or thrice; then having taken breath, put him into a *gallop galliard*, and ſo paſſe along the length of the even *furrow* with that ſalt, making him to do it alſo round about the *Ring*; then his face being towards the Prince, ſtop him and give him freſh breath, then thruſt him into the *Capriole*, now and then making him yerke out behinde, yet ſo as it may be perceived it is your will, and not the Horſes malice; and having gone about the Ring with that ſalt, and his face brought to look upon the *Prince*, ſtop him again and give him breath: then drawing nearer to the Prince, you ſhall beat the turn *Terra Terra*, firſt in a pretty large compaſs, then by ſmall degrees ſtraitning it a little and a little, draw it to the very center where you may give two or three cloſe flying turnes, and then changing your hands undoe all that you did before, till you come to the Rings firſt largneſs, then the Horſes face being direct upon the *Prince* ſtop him, and put him into a corvet, and in that motion hold him a pretty ſpace, making him to do it firſt in an even line, firſt to the right hand, then to the left, now backward

Of the Caragolo.

ward then forward again: and thus having performed every motion orderly and comely, bow down your body to the Prince, and so depart.

But if you intend to Ride only for Recreation, then you shall mark what Lesson your Horse is most imperfect in, and with that lesson you shall ever when you ride both begin and end; after it you shall fall to those lessons which are to your self most difficult, and by the practise of them bring your self to a perfectnesse, then consequently to all other lessons, repeating (as it were) every one over more or less, lest want of use breed forgetfulnesse, and forgetfulness utter ignorance; but if your Recreation in Riding be tyed to any special rules of health, and that your practise therein proceed more from the Commandment of your Physitian then your pleasure, then I would wish you in the morning first to begin with a stirring, or rough Lesson, as the *gallop galliard*, *bounding*, or such like, which having a little stirred your blood, and made it warm, you shall then calme it again with a gentle manage, or the galloping of large Rings; then to stir your spirits again, to bring the stone down, or procure appetite, passe into the *capriola* or *corvet*; and then to make quiet those moved parts, set the turn called, *Terra, Terra*, the *Incavaire*, and such like. And thus one while stirring your blood, and another while moderately allaying such stirring, you shall give your body that due and proper exercise which is most fit for health and long life. Many other wayes this Recreation may be used for the good of a mans body, which because particular infirmities must give particular rules how and when to use it, I will at this time speak no further thereof, but refer the exercise to their own pleasures which shall practise the same, and to the good they shall find in the practice. To ride for recreation.

CHAP. III.

Of the breeding of all sorts of Horses, fit for the Husbandmans use.

THe minds of men being swayed with many various motions, take delight sometimes to be recreated rather with contemplative delights, then with active pleasures, and there is

ſtrong reaſon therefore, becauſe diſability of body, or affaires of the Kingdome or Common-wealth; may take a man from thoſe pre-occupations, which otherwiſe might ſtirre him to more laborious exerciſe; and of theſe contemplative Recreations. I can prefer none before that Gentlemanly and beneficiall delight of breeding creatures meet for the uſe of man, and the good of the Common-Wealth, wherein he liveth: and of theſe breedings I cannot eſteem any ſo excellent, as the breeding of Horſes, both for the pleaſure we gaine thereby in our own particular ſervice, and alſo for the ſtrength, defence, and tillage of the Kingdome.

The breeding of Horſes.

He therefore that ſuteth his recreation to the breeding of horſes muſt firſt have reſpect unto the ground whereon he liveth or injoyeth; for every ground is not meet to breed on, but ſome too good, ſome too bad: ſome too good, becauſe they may be exhauſted to a more beneficiall commodity, Horſes having a world of caſualties attending on them, and many years before the true profit doth ariſe and ſome too bad, becauſe the extream barrenneſſe of the ſame will deny competent nouriſhment to the thing bred, and ſo to the loſſe of time and profit adde mortality.

Crounds to breed on.

The grounds then meet to breed horſes on, would neither be extream fruitfull, nor extreame barren, but of an indifferent mixture, yeeld rather a ſhort ſweet burthen, then a long, rich and fruitfull, it would rather lye high then low, but howſoever firme and hard under the foot; it would be full of Mole-hils uneven treadings, hills, and much craggineſſe, to bring Colts to nimbleneſs of foot, it would have good ſtore of freſh waters, an open ſharp ayr, and ſome convenient covert; and this ground is beſt, if it be ſeverall and incloſed, yet may be bred upon, though it be open, and in common, only ſome more carefulneſs to bee looked for, a little before, and in the time of Foaling. Nay, the grounds which are neither ſeverall nor common, are very good alſo to breed on, and thoſe be your teathering grounds, which we call particular grounds; for though they be proper commonly to one man, yet they are not divided nor eaten otherwiſe then at the owners pleaſure: And theſe teathering grounds are as good as any grounds for the firſt nouriſhing of a Foale, if they be

be amongſt Corn-grounds or any grain except peaſe only.

If you have much ground to breed on, you ſhall divide it into many paſtures, the leaſt and barrenneſt for your Stallion to run with your Mares in, thoſe which have leaſt danger of waters are for your Mares to foal in, the fruitfulleſt and of beſt growth, for your Mares to give milk in; and the moſt ſpacious and uneveneſt to bring up your Colts in, after they are weaned. Diviſion of grounds.

For the choice of a good Stallion, and which is beſt for our Kingdome, opinion ſwayeth ſo far, that a man can hardly giue well received Directions: yet ſurely if men will be ruled by the truth of experience, the beſt Stallion to beget horſes for the Wars is the *Courſer*, the *Jennet*, or the *Turks*; the beſt for courſing and running is the *Barbary*; the beſt for hunting is the *Baſtard courſer* begot of the *Engliſh*; the beſt for the Coach is the *Flemiſh* the beſt for travell or burthen is the *Engliſh*, and the beſt for eaſe is the *Iriſh hobby*. Choice of Stallion, and which are beſt.

For the choyce of *Mares*, you ſhall greatly reſpect their ſhapes and mettals, eſpecially that they be beautifully fore handed for they give much goodneſſe to their Foales: and for their kinds, any of the *Races* before ſpoken of is very good, or any of them mixt with our true Engliſh *Races*, as *Baſtard-courſer*, *Mare*, *Baſtard-Jennet*, *Baſtard-Turke*, *Barbary*, *&c.* Choyce of Mares.

The beſt time to put your Stallion and Mares together is in the middle of *March*, if you have any graſs, as you ſhould have great care for that purpoſe, and one foal falling in *March*, is worth two falling in *May*, becauſe he poſſeſſeth, as it were, two winters in a year, and is thereby ſo hardned, that nothing can (almoſt) after impare him, and the beſt time to take your horſe from the Mares again, is at the end of *April*, or middle of *May*, in which you ſhall note, that from the middle of *March*, till the midſt of *May*, you may at any time put your Stallions to your Mares, and a months continuance is ever ſufficient: provided ever, as near as you can, that you put them together in the increaſe of the Moon; for Foals got in the wane are not accounted ſtrong or healthfull. When to put them together

For covering of Mares, it is to be done two wayes, out of hand, or in hand; out of hand, as when the Horſe and Mares run together abroad, as is before ſaid; or turned looſe into ſome Of covering Mares.

empty

empty barn for three nights one after another, which is the ſureſt and the ſafeſt way for a Mares holding; or in hand, early in a morning, and late at an evening two or three dayes together, when you bring the Horſe to the Mare, and make him cover her once or twice at a time holding Him faſt in your hand, and when the act is done, lead him back to the ſtable; and in this act you ſhall ever obſerve, as ſoon as the Horſe commeth from her back, preſently to caſt a pale of cold water on her hinder parts, or elſe to chaſe her ſwiftly, up and down, for fear, by ſtanding ſtill ſhe caſt out the ſeed, which is very ordinary.

To know if a Mare hold.

To know whether your Mare hold to the Horſe or no, there be divers wayes, of which the beſt is by offering her the Horſe again at the next increaſe of the Moon, which if ſhe willingly receive, it is a ſign ſhe held not before; but if ſhe refuſe, then it is moſt certain ſhe is ſped, or if you powre a ſpoonfull of cold vinegar into her ear, if ſhe ſhake only her head, it is a ſigne ſhe holds; but if ſhe ſhake head, body, and all, then truly it is a ſign that ſhe doth not hold: Laſtly, if after ſhe is covered, you ſee her ſcour, her coat grow ſmooth and ſhining, and that ſhe doth (as it were) renew and increaſe in liking, it is a ſign ſhe holds: but if ſhe hold at a ſtay without any amendment, then offer the Horſe again for ſhe is not ſerved.

To conceive Male foals.

To make your Mares conceive moſt male Foales, you ſhall be ſure to keep your Stallion prond, and your Mare poor, that his luſt maſtering hers, he may only be predominant and chief in the action; many other rules fancy deviſeth, but they erre in their ends, and I would by no means have this diſcourſe capable of any uncertainty.

To provoke luſt.

If you have any advantage given you by friendſhip, or otherwiſe whereby you may have a Mare at the preſent very well covered, only yours is not yet ready for the horſe, you ſhall in this caſe to provoke luſt in her, give her to drink good ſtore of clarified honey, and new milk mixt together, and then with a buſh of nettles all to nettle her privy parts, and then immediately offer her to the Horſe.

To keep Mares from barrenneſſe.

To keep your Mares from barrenneſs, and to make them ever apt to conceive foale, you ſhall by no meanes feed too extreame fat, but keep them in a middle ſtate of body by moderate labour

bour, for the leaner they are when then they come to take Horſe, the much better they will conceive.

After your Mares have been covered, and that you perceive in them the marks of conceiving, you ſhall let them reſt three weeks or a month, that the ſubſtance may knit; then after, moderately labour or travel them, till you ſee them ſpring, and then turn them abroad, and let them run till they foale; for to houſe them after is dangerous and unwholſome. Ordering of Mares after covering.

If your Mare be hard of foaling, or will not cleanſe after ſhe hath foaled, you ſhall take a pint of running water, wherein good ſtore of fennel hath been boyled, and as much ſtrong, old, ſweet wine, with a fourth part of the beſt Sallet oyl, and having mixt them well together, being but luke warm, pour it into her noſtrils, and then hold and ſtop them cloſe, that ſhe may ſtrain her whole body, and it will preſently give her eaſe. A help for Mares after foaling.

As ſoon as your Mare hath foal'd, you ſhall remove her into the beſt graſs you have, which is freſh and unfoyled, to make her milk ſpring; and if it be early in the year, you ſhall have a care that there be good ſhelter in the ſame, and there let her nouriſh her foal moſt part of the ſummer following. Ordering of Mares after foaling.

As touching the weaning of foals, though ſome uſe to weane them at *Michaelmas*, or *Martilmas* following; out of a ſuppoſition that the winter milk is not good or wholſome, yet they are much deceived; and if you can by any convenient meanes (ſaving greater loſſes) let your foals runne with their Dams the whole year, even till they foale againe, for it will keep the foal better in health, in more luſt, and leaſt ſubject to tenderneſſe. Weaning of Foals.

When you intend to wean your foals, you ſhall take them from their Dams over-night, and drive them into ſome empty houſe, where they may reſt; and the Mares be free from their noiſes; then on the morning following give to every foal faſting a branch or two of *Saven* annoynted or rold in butter, and then having faſted two hours after, give him a little meat, as graſſe, hay, or garbadge of Corn, with ſome clear water, and do this three dayes together; then ſeeing that they have forgotten their Dams, geld ſuch Colt-foals, as you intend to make geldings of; and after their ſwellings are paſt, put them unto your other Colt-foales Ordering after the weaning.

empty barn for three nights one after another, which is the ſureſt and the ſafeſt way for a Mares holding ; or in hand, early in a morning, and late at an evening two or three dayes together, when you bring the Horſe to the Mare, and make him cover her once or twice at a time holding Him faſt in your hand, and when the act is done, lead him back to the ſtable ; and in this act you ſhall ever obſerve, as ſoon as the Horſe commeth from her back, preſently to caſt a pale of cold water on her hinder parts, or elſe to chaſe her ſwiftly, up and down, for fear, by ſtanding ſtill ſhe caſt out the ſeed, which is very ordinary.

To know if a Mare hold.

To know whether your Mare hold to the Horſe or no, there be divers wayes, of which the beſt is by offering her the Horſe again at the next increaſe of the Moon, which if ſhe willingly receive, it is a ſign ſhe held not before ; but if ſhe refuſe, then it is moſt certain ſhe is ſped, or if you powre a ſpoonfull of cold vinegar into her ear, if ſhe ſhake only her head, it is a ſigne ſhe holds ; but if ſhe ſhake head, body, and all, then truly it is a ſign that ſhe doth not hold : Laſtly, if after ſhe is covered, you ſee her ſcour, her coat grow ſmooth and ſhining, and that ſhe doth (as it were) renew and increaſe in liking, it is a ſign ſhe holds : but if ſhe hold at a ſtay without any amendment, then offer the Horſe again for ſhe is not ſerved.

To conceive Male foals.

To make your Mares conceive moſt male Foales, you ſhall be ſure to keep your Stallion proud, and your Mare poor, that his luſt maſtering hers, he may only be predominant and chief in the action : many other rules fancy deviſeth, but they erre in their ends, and I would by no means have this diſcourſe capable of any uncertainty.

To provoke luſt.

If you have any advantage given you by friendſhip, or otherwiſe whereby you may have a Mare at the preſent very well covered, only yours is not yet ready for the horſe, you ſhall in this caſe to provoke luſt in her, give her to drink good ſtore of clarified honey, and new milk mixt together, and then with a buſh of nettles all to nettle her privy parts, and then immediately offer her to the Horſe.

To keep Mares from barrenneſſe.

To keep your Mares from barrenneſs, and to make them ever apt to conceive foale, you ſhall by no meanes feed too extreame fat, but keep them in a middle ſtate of body by moderate labour

bour, for the leaner they are when then they come to take Horſe, the much better they will conceive.

Ordering of Mares after covering.

After your Mares have been covered, and that you perceive in them the marks of conceiving, you ſhall let them reſt three weeks or a month, that the ſubſtance may knit; then after, moderately labour or travel them, till you ſee them ſpring, and then turn them abroad, and let them run till they foale; for to houſe them after is dangerous and unwholſome.

A help for Mares after foaling.

If your Mare be hard of foaling, or will not cleanſe after ſhe hath foaled, you ſhall take a pint of running water, wherein good ſtore of fennel hath been boyled and as much ſtrong, old, ſweet wine, with a fourth part of the beſt Sallet oyl, and having mixt them well together, being but luke warm, pour it into her noſtrils, and then hold and ſtop them cloſe, that ſhe may ſtrain her whole body, and it will preſently give her eaſe.

Ordering of Mares after foaling.

As ſoon as your Mare hath foal'd, you ſhall remove her into the beſt graſs you have, which is freſh and unfoyled, to make her milk ſpring; and if it be early in the year, you ſhall have a care that there be good ſhelter in the ſame, and there let her nouriſh her foal moſt part of the ſummer following.

Weaning of Foals.

As touching the weaning of foals, though ſome uſe to weane them at *Michaelmas*, or *Martilmas* following; out of a ſuppoſition that the winter milk is not good or wholſome, yet they are much deceived; and if you can by any convenient meanes (ſaving greater loſſes) let your foals runne with their Dams the whole year, even till they foale againe, for it will keep the foal better in health, in more luſt, and leaſt ſubject to tenderneſſe.

Ordering after the weaning.

When you intend to wean your foals, you ſhall take them from their Dams over-night, and drive them into ſome empty houſe, where they may reſt; and the Mares be free from their noiſes; then on the morning following give to every foal faſting a branch or two of *Saven* annoynted or rold in butter, and then having faſted two hours after, give him a little meat, as graſſe, hay, or garbadge of Corn, with ſome clear water, and do this three dayes together; then ſeeing that they have forgotten their Dams, geld ſuch Colt-foals, as you intend to make geldings of; and after their ſwellings are paſt, put them unto your other Colt-

foales

foals into a paſture provided for them by themſelves, and your Filly-foals into another by themſelves: which Paſtures may either be high Woods, Commons, or ſuch like ſpacious peeces of ground, where they may run till they be ready for the Saddle.

Gelding of Colts.

Now, albeit I proportion unto you this manner of gelding of Foals, yet I would have you know that the beſt and ſafeſt way to geld them is, if it may be under the Dam when they ſuck, as at nine, or at fifteen dayes of age, if the ſtones appear, or elſe ſo ſoon as you can by any means perceive them fall down into the Cod, for then there will be no danger of ſwelling, or other miſchiefs, which commonly attend the action. And thus much touching the breeding of Horſes, and the obſervations due to the ſame through all the courſes and paſſages thereof, as hath been found by ancient practice and experience, as appeares in my *Maſter-piece.*

CHAP. IV.

Of Horſes for travel, and how to make them amble.

THE Husbandman, whoſe occupation is the generall affairs of the Common-wealth as ſome to the market, ſome to the City, and ſome to the ſeats of Juſtice, muſt neceſſarily be imployed almoſt in continuall travell; and therefore it is meet that he be provided ever of a good and eaſie travelling horſe.

The marks of good travelling Horſe.

The marks whereby he ſhall chuſe a good travelling horſe, are theſe; he ſhall be of good colour and ſhape, lean headed and round foreheaded, a full eye, open noſtrill, wide jawed, looſe thropled, deep neckt, thin [illegible] broad breſt, flat chinn'd, out ribb'd, clean limb'd, ſhort-jointed, ſtrong hoofed, well mettal'd, neither fiery nor craving, ſtrong in every member, and eaſie to mount and get up upon; he ſhall follow without haling, and ſtand ſtill when he is reſtrained.

To make a Horſe amble.

Now foraſmuch as there are a world of good horſes which are not eaſie, and a world of eaſie horſes which are not good, you ſhall by theſe directions following, make any horſe amble whatſoever: firſt, then you ſhall underſtand that practice hath made divers men believe that divers wayes they can make a horſe amble,

amble as by gaging them in the mouths, by toyling them in deep earth, by the help of ſhooes, by gallopping and tyring, or ſuch like, all which are ill and imperfect; yet the truth is, there is but one certain and true way to compaſs it, and that is to make a ſtrong garth web, flat and well quilted with cotten, four paſterns for the ſmalls of his fore-legs, under his knees, and for the ſmalls of his hinder leggs ſomewhat below the ſpavins joynts: to theſe paſterns you ſhall fix ſtrong ſtraps of leather, with good iron buckles to make ſhorter or longer at pleaſure, and having placed them about his fore legs, you ſhall take two ſeverall round ropes of an eaſie twiſt, made with ſtrong loops at either end, and not above eight handfulls in length, and theſe the horſe ſtanding to a true proportion, you ſhall faſten to the four ſtraps of leather, to wit, one of them to his near fore-legge, and his near hinder legge, and the other to his far fore-leg, and his far hinder legge, which is called amongſt Horſe-men trammelling; with theſe you ſhall let him walk in ſome incloſed piece of ground, till he can ſo perfectly go in the ſame, that when at any time your offer to chaſe him, you may ſee him amble, ſwiftly and truly: then you ſhall take his back, and ride him with the ſame trammels, at leaſt three or four times a day till you find that he is ſo perfect, that no way can be ſo rough and uneven, as to compell him to alter his ſtroke or go unnimbly. This done, you may firſt take away one trammell, then after the other, and onely wreath about under his fore-feet locks thick and heavy, great royls of Hay or Straw Ropes, and ſo ride him with the ſame a good ſpace after; for it will make him amble eaſie, then cut them away, and ride and exerciſe him without any thing but the ordinary help of the bridles, and there is no doubt but he will keep his pace to your full contentment and pleaſure.

Divers wayes of ambling.

Of trammelling.

Of whiſping.

Now during this time of your teaching, if your horſe ſtrike not a large ſtroak and over-reach enough, then you ſhall make the trammel the ſtraiter, but if he over reach too much, then you ſhall give it more liberty: and herein you ſhall find, that an inch ſtraitning, or an inch inlarging will adde or abate at leaſt half a foot, an whole foot and direct ſtroak: and thus much touching the teaching of any horſe to amble, of what nature or quality ſoever he be, or how unapt or untoward ſoever to learn.

CHAP. V.

Of the ordering and dieting of the Hunting-Horse.

Some love hunting for the exercise of their own bodyes, some for the chase they hunt, some for the running of the hounds, and some for the training of their Horses whereby they may find the excellency of their goodnesse and indurance: to him therefor which placeth his delight in the goodnesse of his horse I would wish him thus to order and dyet him, and he shall most assuredly come to the true knowledge of the best worth which is within him; and if in these rules, which I now shew, I be lesse curious then formerly I have been, let no man wonder thereat, but know that time (which is the mother of experience) doth in our labours shew us more new and more neerer wayes to our ends, then at the first wee conceived: And though when I first practised this Art; I knew not how to bring a very fat horse from *Michaelmas* till *Christmas*, to shew his utmost perfection, I know now in two months (though never so foul) how to make him for any wager, daring now boldly to adventure on that, with which before I thought almost present death to offer; thus doth observation and labour find out the darkest secrets in Art.

Taking up of the Hunting Horse.

To begin then with the first ordering of a Hunting Horse, you shall know that the best time to take him from grass is about *Bartholmew-tide*, the day being fair, dry, and pleasant, and as soon as he is taken up to let him stand all that night in any vast house to empty his body, the next day stable him, and give him wheat straw, if you please, but no longer in any wise; for though the old rule is to take up horses bellies with straw, yet it straitneth the guts, heats the liver, and hurteth the wind: therefore let only moderate exercise, as riding him forth to water morning and evening, and other ayrings do what you expect straw should; and for his food let it be hay that is sweet though rough, and either old, or at least well sweat in the Mow.

Cloathing the Horse.

After his belly is emptied, you shall cloath him first with a single cloath, whilst the heat indureth, and after with more, as you shall see occasion require, and when you begin to cloath the horse, then shall you dresse, curry, and rub him also. Now for as much as it is a rule with ignorant Horsemen, that if they have but

but the name of keeping a Hunting horſe, they will with all care (without any reaſon) lay many cloaths upon him, as if it were a ſpeciall Phyſick, you ſhall know they are much deceived therein, and may ſooner doe hurt than good with multiplicity of cloaths; therefore to cloath a horſe right, cloath according to the weather, and the temper of his body; and thus if you ſee your horſe be ſleight, ſmooth and well coloured, then cloath him temperately, as with a ſingle cloath of canvaſe or ſackcloath at the moſt; and if then as the year grows colder, you find his hair riſe or ſtare about his neck, flanks, or outward parts, then you ſhall adde a woollen cloath, or more if need require, till his hair fall ſmooth again, holding it for your rule, that a rough coat ſhews want of cloath, and a ſmooth coat cloathing enough, yet if your horſe have been clean fed, taken exerciſe ſufficient, and hath not much glut within him, if then you find that in the night he ſweateth in his cloaths, then it is a ſign he is overfed; but if he be foul inwardly, or hath no ſweat formerly, and now ſweats comming to good feeding, then you ſhall augment rather than diminiſh any cloathing for his foulneſſe, but then breaketh out, and being evacuated, he will come to dryneſſe of body again, and ſo continue all the year after; and ſurely for an ordinary proportion of cloaths, I hold a canvaſe cloath, and a cloath of Houſe-wives woollen to be at full ſufficient for a Hunting Horſe.

A Hunting horſe would be dreſt in his dayes of reſt, twice a day, that is, before he go to his morning watering, and before he go to his evening watering; for the manner of his dreſſing after he is uncloathed, you ſhall firſt curry him from the tips of the ear, to the ſetling on of his tayle, all his whole body moſt intirely over with an iron comb; his legges under the knees and cambrels only excepted; then you ſhall duſt him, then curry him again all over with a round bruſh of Briſtles, then duſt him the ſecod time, then rub all the looſe hairs away with your hands wet in clean water, and ſo rub till the horſe be as dry as at the firſt, then rub all his body and limbs over with an hair cloath: laſtly, rub him over with a fine white linnen rubber, then pick his eyes, noſtrils, ſheath, cods, tuell, and feet very clean, and ſo cloath him, and ſtop him round with wiſps, if you

Of Dreſſing the Hunting Horſe.

water within the house; otherwise saddle him after his body is wrapt about in a woollen cloath, and so ride him forth to the water.

Of watering the hunting horse.

The best water for a hunting horse, is either a running River, or a clear Spring, remote from the stable a mile, or a mile and a half at most, and near unto some plain piece of ground, where you may scope and gallop after he hath drunk; and as soon as you bring your horse to the water, let him take his full draught without trouble or interruption: then gallop and scope him up and down a little, and so bring him to the water again, and let him drink what he please, and then gallop him again: and thus do, till you find he will drink no more; then having scop't him a little, walk him with all gentlenesse home, and there cloath him up, stop him round with great soft wisps, and so let him stand an hour upon his bridle, and then feed him.

Of feeding the hunting horse.

To speak first for the food for hunting horses, the most ordinary is good sweet sound oats, neither throughly dryed with age, or else on the Kiln, or in the Sun, and if your horse be either low of flesh, or not of perfect stomack, if to two parts of those Oats you ad a third part of clean old beans, it shall be very good and wholsome, and if your horse be in dyet for a match, and have lost his stomack if then you cause these beanes to be spelted upon a miln, and so mixt with Oats; it will recover him. The next food, which is somewhat stronger and better, is bread thus made, take two bushels of good clean beans and one bushell of wheat, and grind them together; then through a fine Range, boult out the quantity of two pecks of pure meal, and bake it in two or three loaves by it self, and the rest sift through a meal five; and knead it with water and good store of barme, and so bake it in great loaves, and with the courser bread feed your horse in his rest, and with the finer against the dayes of sore labours. Now for the hours of his feeding it shall be in the morning, after his comming from water, an hour after high noon, after his comming from his evening water, and at nine or ten of the clock at night upon the dayes of his rest; but upon the dayes of his exercise, 2 hours after he is throughly cold inwardly and outwardly, and then after according as before mentioned. Lastly, for the proportion of food, *you shall keep no certain quantity, but according*

cording to the horſes ſtomack, that is to ſay, *you ſhall feed him by a little at once, ſo long as he eats with a good appetite; but when he begins to trifle or fumble with his meat, then to give him no more.* Now for his hay, you ſhall ſee that it be dry, ſhort, uplandiſh hay; and ſo it be ſweet, reſpect not how coorſe or rough it is, ſith it is more to ſcour his teeth, and cool his ſtomack, then for any nouriſhment expected from it.

Touching the Horſes exerciſe, *which is only in the following of the hounds*, you ſhall be ſure to train him after thoſe which are moſt ſwift and ſpeedy; for ſo you ſhall know the truth, and not be deceived in your opinion. Touching the dayes, *it ſhall be twice a week at leaſt, but moſt commonly thrice*, as for the quantity of his exerciſe, it muſt be according to his foulneſſe or cleanneſſe: for if he be very foul, *you muſt then exerciſe moderately to break his greaſe*: if half foul half clean, *then ſomewhat more to melt his greaſe*: and if altogether clean, then you may take what you pleaſe of him (provided, that you do nothing to diſcourage his ſpirits, to abate his mettal, or to lame his limbs) and after every dayes exerciſe, be aſſured either to give him the ſame night, or the next day following, ſomething by way of ſcouring; or otherwiſe, to take away the greaſe formerly melted, by means whereof you ſhall be ever ſure to keep your horſe in all good health and perfection. The exerciſe of the horſe.

The beſt and moſt excellenteſt way to ſcour or purge your horſe from all greaſe, glut, or filthineſſe within his body, which is a ſecret hitherto was never either ſufficiently taught, or perfectly learned, is to take of Anniſeeds three ounces, of Cumminſeeds ſix dramms, of Carthamus a dramme and a half, of Fenugreek-ſeed one ounce two dramms, of Brimſtone one ounce and a half, beat all theſe to a fine powder, and ſearſe them: then take of Sallet-oyle a pint and two ounces, of honey a pound and a half and of white wine four pints, then with as much fine white meal as will ſuffice, make all into a ſtrong ſtiffe paſte, and knead and work it well: this paſte keep in a clean cloath, for it will laſt long, and after your horſe hath been hunted, and is at night, or in the morning exceeding thirſty, take a ball thereof as big as a mans fiſt, and waſh and diſſolve it in a gallon or two of cold water, and it will make the water look white like milk: then offer The ſcouring of the horſe.

it

it the horſe to drink in the dark, leſt the colour diſpleaſe him: if he drink it, then feed him: but if he refuſe to drink it, yet care not, but let him faſt without drink till he take it, which aſſuredly he will doe in twice or thrice offering, and after once he hath taken it, be then aſſured he will forſake any other drink for it, of this drink, your horſe can never take too much nor too oft; if he have exerciſe: or otherwiſe it feeds too ſore. For all inward infirmities whatſoever it is a preſent remedy: therefore I would not wiſh any horſemen of vertue at any time to be without it; and being once made, it will laſt three or four months at leaſt.

Ordering of a Horſe after exerciſe.

After your Horſe hath been exerciſed either with Hunting, running train-ſets, or otherwiſe: you ſhall ever cool him well in the field before you bring him home: but being come to the ſtable you ſhall neither waſh nor walk, but inſtantly houſe him give him ſtore of freſh litter and rub him therewith, and with dry cloaths, till there be not a wet hair about him, then cloath him with his ordinary cloaths, and wiſpe him round: then caſt another ſpare cloath over him, which you may bate at your pleaſure, and ſo let him ſtand till it be time to feed him. And thus you may keep any hunting horſe either for match or otherwiſe, in as good ſtate and ſtrength as any Horſeman in this Nation, though he exceed you far both in reputation and experience.

CHAP. VI.

Of the ordering and dyeting of the Running Horſe.

IF any Husbandman have his mind taken up only with the delight of running Horſes; which is a noble ſport, and though not of ſo long indurance, yet equall with any before ſpoke of he ſhall for the bettering of his knowledge give to his memory theſe few rules following, by which he ſhall rightly order and dyet him.

Of his taking up.

Firſt, for his taking up from graſs (for there for order ſake we muſt firſt begin) it ſhall be at the ſame time of the year, and after the ſame manner that you took up your hunting horſe, and till you have enſeamed him, hardned his fleſh, taken away his inward greaſe, and brought him to a good perfectneſs of wind, you ſhall cloath him, dreſſe him, water him, feed him, exerciſe him

him, purge him and order him after labour, in all poynts and in all thing as you did your hunting horſe.

When he is thus cleau of body and wind, you ſhall then lay on ſome more cloaths, then you did on your hunting horſe, to purge his body a little the more, and to make him the more apt to ſweat, and evacuate humors as they ſhall grow: the ordinary quantity whereof, would be a warme narrow wollen cloath about his body on either ſide his heart, then a fair white ſheet, a woollen cloath about it, and a canvaſe cloath or two above it, and before his breaſt a woollen cloath at leaſt two double: he would continually ſtand upon a clean litter, and have his ſtable very dark, and perfumed with Juniper, when as the ſtrength of his dung ſhall annoy it. Of cloathing him.

For this dreſſing it ſhall be in all poynts done as you did to your hunting horſe, onely to dreſſe him once a day is ſufficient, and that ever in the afternoon: but for rubbing his limbs or body with dry cloaths or wiſps, you ſhall do as often as you come into the ſtable, provided that you turn but his cloaths up, but not take them from his body. Of dreſſing him.

You ſhall water your running horſe as you watered your hunting horſe, and give him the ſame exerciſe after it, only you ſhall not bring him into the ſtable of at leaſt an hour and more after he is watered. Of watering him.

The beſt food for your ruuning horſe, is either good ſweet Oats well dryed, ſunned, and beaten, or bread made of two parts wheat, and but one part beans, and boulted, and ſifted, and knodden, as was before ſhewed, only if you adde to your better ſort of bread the whites of twenty or thirty Egges, and with the barm a little: Ale alſo, it will be much the better; for you ſhall not reſpect how little water you uſe at all: the hours you feed in, and the quantity of the food ſhall be the ſame, and in the ſame manner as was mentioned before, for the hunting horſe, yet with theſe obſervations, that if your horſe be very lean, ſickly, and have a weekey ſtomack, that then you may as before ſhewed, give him with his Oats a few ſpelted beans, or elſe waſh his Oats in ſtrong Ale, or Beer, or in the whites of a couple of eggs. Of feeding him.

Touching his exerciſe, it conſiſteth in two kinds, the one ayring, the other courſing: ayring is a moderate and gentle exerciſe Of his exerciſe by ayring.

which

which you ſhall uſe morning and evening, by riding or leading your horſe a foot pace (but riding is better and leſſe in danger of cold) in the morning after his water up to the hills, and in the evening after his water by the River-ſide, by the ſpace of an hour or two together; and before you lead him forth to ayre, you ſhall be ſure to give him a rere Egge broken into his mouth as ſoon as his bridle is put on for it will increaſe wind: and this ayring you ſhall by no means forbear, but upon his dayes of purging or ſweating, or when it much raineth, for then to ayr is unwholſome. Again, if your horſe be very fat, you ſhall ayr before Sun riſe, and after Sun ſet: but if he be lean, then you ſhall let him have all the ſtrength and comfort of the Sun you can deviſe; and during this ayring, you ſhall be ſure that your horſe be cloathed very warm, eſpecially before the breaſt and on each ſide the heart, for cold to a running horſe is mortall.

Exerciſe by courſing.

You ſhall courſe your horſe according to his ſtrength and ability of body, that is to ſay, twice a week, thrice, or as oft as you ſee cauſe, and you ſhall courſe him ſometimes in his cloaths to make him ſweat, and conſume his greaſe, and that muſt be done moderately and gently: and ſometime without his cloath, to increaſe wind; and that ſhall be done ſharply and ſwiftly: you ſhall by keeping your horſe faſting the night before, be ſure that his body be empty before he do courſe, to waſh his tongue and noſtrils with vinegar, or to piſs in his mouth ere you take his backe is very wholſome: you ſhall lead him in your hand well and warm cloathed to the courſe, and there uncloath him and rub his limbs well: then having courſt him, after a little breath taking, cloath him again and ſo ride him home, there rub him throughly, and let him ſtand till he be fully cold. which perceived, let his firſt meat you give him, be a handfull or two of the ears of Pollard Wheat: then after, his ordinary food as aforeſaid.

Of ſweats.

There is alſo another exerciſe for your running horſe which is, ſweats in his cloaths, either abroad or in the houſe, for ſweats in his cloaths abroad, they are thoſe which are taken upon the courſe, and are formerly ſpoke of, that they muſt be given by a moderate gallopping, no man running, and as ſoon as your horſe hath paſt over his courſe, and is in a high ſweat, you ſhall inſtantly

inſtantly have him home and there lay more cloaths upon him and keep him ſtirring till he have ſweat ſo in the ſtable an hour or more, then abate his cloaths by little and little, till he be perfectly cooled and dryed; which you muſt further by rubbing him continually with dry cloaths, and by laying dry cloaths on, and taking the wet away: but for ſweats in his cloaths, without any exerciſe abroad, you ſhall give them either when the weather is ſo much unſeaſonable, that you cannot go forth, or when your horſe is ſo much in danger of lameneſſe, that you dare not ſtrain him; and you ſhall do it thus: Firſt take a blanket folded and warmed very hot and wrap it about his body, then over it lay two or three more, and wiſp them round, then over them as many cover-lids, and pin them faſt and cloſe; then make the horſe ſtir up and down the ſtable till he begin to ſweat, then lay on more cloaths, and as the ſweat trickleth down his face, ſo rub it away with dry cloaths till he have ſweat ſufficiently; then (as before is ſhewed) abate the cloaths by little and little, and rub him in every part, till he be as dry as at firſt.

After every courſe or ſweat, you ſhall ſcour or purge your horſe in the ſame manner, and with the ſame medicine that you did your Hunting-horſe; for it is the beſt that can by art be invented, being both a purge and a Reſtorative, cleanſing and comforting all the parts of a Horſes body: but if you think it purgeth not enough, then you ſhall take twenty Raiſins of the Sun, the ſtones pickt out, and ten Figs ſlit in the midſt, boyl them in a pottle of fair running water, till it come to be thick, then mixe it with powder of Lycoras, Anniſeeds, and Sugar candy, till it come to a ſtiff paſte, then make pretty round balls thereof, and roule them up in butter, and give your horſe three or four of them, the next morning after his ſweat or courſe, and ride him an hour after, and then ſet him up warm. Of ſcouring him.

After your horſe hath been courſt or ſweat, and is as before ſaid cold and dry, you ſhall then unbridle him, give him ſome few wheat eares, and then at an hour or two after, give him a very ſweet maſh, then ſome bread after, then at his due hour dreſſe him, and give him when you find him thirſty ſome cold water, with a ball of your leaven diſſolved into it, and ſo let him ſtand till you feed him for all night. Ordering after exerciſe.

General rules for a Running Horse.

Course not your Horse sore for at least four or five dayes before you run your match, lest the soreneſſe of his limbs abate him of his speed.

Except your horse be a very foul feeder muzzel him not above two or three nights before his match, and the night before his bloudy courſes.

Give your horse as well his gentle courſes, as his sharp courſes upon the Race he must run, that he may as well find comfort as displeasure thereon.

In training your horse, observe not the number of the miles, but the labour fit for your horse.

Be sure upon the match day that your horse be empty, and that he take his rest untroubled, till you prepare to lead him forth.

Shooe your horse ever a day before you run him, that the pain of the hammers knocks may be out of his feet.

Saddle your Horse on the Race day in the stable before you lead him forth, and fix both the pannel and the girths to his backe and sides with shooemakers waxe, to prevent all dangers.

Lead your Horse to his course with all gentleneſſe, and give him leave to smell to other horses dung, that thereby he may be induced to stale and empty his body as he goes.

When you come to the place where you must start, first rub his limbs well, then uncloath him, then take his back, and the word given, start him with all gentleneſſe and quietneſſe that may be, lest doing any thing rashly, you happen to choak him in his own wind.

And thus much for the ordering and dyeting of the Running horse, and the particularities belonging to the same.

CHAP. VII.

The ordering of the travelling Horse.

General rules for a travelling horse.

NOw for our Husbandmans Travelling horse, which is to carry him in his journeys, and about his business in the Country, he shall first feed him with the best sweet hay, dry oats or dry beans and oats mixt together: in his travell he shall feed him according to his stomack, more or lesse, and in his rest at a certain

certain proportion ; as half a peck at each watering, is utterly ſufficient.

If you travell feed your horſe early, that he may take his reſt ſoon.

In travel by no means waſh nor walk your horſe, but be ſure to rub him clean.

Water him a mile before you come to your Inne, or more, as ſhall lye in your journey, or if you fail thereof, forbear it till next morning: for water hath often done hurt, want of water never did any.

Let your horſe neither eat nor drink when he is extream hot for both are unwholſome.

When the dayes are extream hot, labour your horſe morning and evening, and forbear high-noon.

Take not your ſaddle off ſuddenly, but at leiſure, and laying on the cloath, lay on the ſaddle again till he be cold.

Litter your Horſe deep, and, in the dayes of his reſt, let it alſo lye under him.

Dreſs your horſe twice a day when he reſts, and once when he travells.

If the horſe be ſtoned let him go to the foyl, and be purged with graſs in *May*; a months time is long enough, and that graſs which grows in Orchards under trees is beſt.

Let him blood, ſpring and fall, for they are the beſt times to prevent ſickneſſes.

In your journying light at every ſteep hill, for it is a great refreſhing and comfort to your horſe.

Before you ſleep, every night in your journey ſee all your horſes feet ſtopt with Oxe dung, for it taketh away the heat of travell and ſurbating.

Many other neceſſary rules they are, but ſo depending upon theſe already ſhewed, that who ſo keepeth them ſhall not be ignorant of any of the reſt ; for they differ more in name then nature.

CHAP. VIII.

How to cure all generall inward ſickneſſes in horſes, which trouble the whole body; of Fevers of all ſorts, Plagues, Infections, and ſuch like.

SIckneſſes in general are of two kinds, one offending the whole body, the other a peculiar member: the firſt hidden and not viſible, the other apparant and known by his outward demonſtration. Of the firſt then, which offend the whole body, are Fevers of all ſorts as the Quotidian, the Tertian, the Quartan, the Continuall, the Hittique, the Fevers in Autumn, in Summer, or in Winter, the Fever by ſurfeit, Fever Peſtilent, Fever Accidentall, or the generall Plague, they are all known by theſe ſigns, much trembling, panting, and ſweating, a ſullen countenance that was wont to be cheerfull, hot breath, faintneſſe in labut, decay of ſtomack, and coſtiveneſſe in the body; any, or all of which when you perceive, firſt let the horſe blood, and after

The Cure. give him this drink: Take of *Selladine* roots leaves and all a good handfull, as much *Wormwood* and as much *Rew*, waſh them well, and then bruiſe them in a morter, which done, boyl them in a quart of Ale well, then ſtrain them and adde to the liquor half a pound of ſweet butter, then being but luke-warme give it the horſe to drink, or half an ounce of *Diapent*, in a pint of Muſkadine.

CHAP. IX.

Of the Head-ach, Frenzie, or Staggers.

THe ſigns to know theſe diſeaſes, which indeed are, all of one nature, and work all one effect of mortality, are hanging down of the head, watry eyes, rage and reeling. And the cure is to let the horſe blood in the neck three mornings together, and every morning to take a great quantity then after each

The Cure. morning blood-letting, to give the horſe this drink: Take a quart of Ale, and boyl it with a big white bread cruſt, then take it from the fire, and diſſolve three or four ſpoonfulls of honey in it, then luke warm give it the horſe to drink, and cover his temples over with a playſter of Pitch; and keep his head exceeding warm, let his meat be little, and his ſtable dark: but to give him

him the former quantity of *Diapente*, either in Muskadine or honey water is the beſt cure.

CHAP. X.

Of the ſleeping Evill.

THE Sleeping Evill or Lethargie in Horſes proceeds from cold fleamy moyſt humors, which bind up the vitall parts and makes them dull and heavy. The ſigns are continall ſleeping or deſire thereunto. The cure is, to keep him much waking, and twice in one week to give him as much ſweet ſoap (in nature of a pill) as a Ducks egge, and then after give him to drink a little new milk and honey, which is the onely cure at the firſt, for this diſeaſe. But to be certain I pray look in my Maſter peece, and there you ſhall find of the infirmity more largely diſcourſed of, this being but a general cure of all cattell, and not particularly handled of horſes, as that is. The Cure.

CHAP. XII.

Of the Falling Evill, Planet ſtrooke, Night-mare, or Palſey.

THough theſe diſeaſes have ſeverall faces, and look as though there were much difference between them, yet they are in nature all one, and proceed all from one offence, which is only cold flegmatick humors, ingendred about the brain, and benumming the ſenſes, weakning the members, ſometimes cauſing a horſe to fall down, and then it is called the falling evil; ſometimes weakning but one member only, then it is called Planet-ſtrook ſome imes oppreſſing a horſes ſtomack, and making him ſweat in his ſleep, and then it is called the Night-mare; and ſometimes ſpoyling an eſpecial member, by ſome ſtrange contraction, and then it is called a Palſey. The cure for any of theſe infirmities is to give the horſe this purging pill: Take of *Tar* three ſpoonfulls, of ſweet butter the like quantity, beat them well together with the powder of *Lycoras*, *Anniſeeds*, and *Sugar-candy*, till it be like paſte, then make it into three round balls, and put into each ball two or three cloves of Garlick, and ſo give them unto the horſe; obſerving to warme him both before and after, and keep him faſting two or three hours likewiſe, both before and after. The Cure.

CHAP.

CHAP. XII.

Of the generall Cramp, or Convulsion of Sinews.

CRamps are taken to be the contraction or drawing together of the sinews of any one member; but Convulsions are when the whole body, from the setting on of the head to the extreameſt parts are generally contracted and ſtiffned. The cure of either is, firſt to chaſe and rub the member contracted with vinegar and common oyle, and then to wrap it all over with wet Hay, or rotten litter, or elſe with wet woollen cloaths, either of which is a preſent remedy.

The Cure.

CHAP. XIII.

Of any cough or co'd whatſoever, wet or dry, or for any conſumption or putrifaction of the Lungs whatſoever.

A Cold is got by unnaturall heats, and too ſuddain coolings, and theſe colds ingender coughs, and thoſe coughs, putrifaction or rottenneſſe of the Lungs. The cure therefore for them all in generall, is to take a handfull or two of the white and greeniſh Moſſe which grows upon an old Oke-pole, or any old Oke-wood, and boyl it in a quart of milk; till it be thick, and being cold turned to a Jelly, then ſtrain it, and give it the Horſe luke-warm every morning till his cough end; or elſe take three quarters of an ounce of the conſerve of *Elicampane*, and diſſolve it in a pint of Sack, and luke warm give it the horſe faſting; then ride him after it, and ſet him up warm, feed as at ordinary times; thus do three mornings together.

CHAP. XIV.

Of the running Glaunders, or the mourning of the Chine.

TAke of *Auripigmentum* two drams, of *Tuſſilaginis* made into powder as much, then mixing them together with Turpentine till they be like paſte, and making thereof little cakes, dry them before the fire; then take a chafing-diſh and coals, and laying one or two of the cakes thereon, cover them with a tunnell, and then the ſmoak riſing, put the tunnel into the horſes noſtrils

noſtrils and let the ſmoak go up into his head: which done, ride the horſe till he ſweat; do thus once every morning before he be watered, till the running at his noſtrils ceaſe, and the kirnels under his chaps wear away.

CHAP. XV.

Of hide-bound, or conſumption of the fleſh.

HIde bound or conſumption of the fleſh, proceeds from unreaſonable travell, diſorderly dyet, and many ſurfeits. It is known by a generall diſlike and leanneſſe over the whole body and by the ſticking of the skin cloſe to the body, in ſuch ſort that it will not riſe from the body. The cure is, firſt to let the horſe bloud, and then give him to drink three or four mornings together a quart of new milk, with two ſpoonfulls of honey, and one ounce of *London treacle*: then let his food be either ſodden Barly, warm Grains and Salt, or Beans ſpelted in a Mill, his drink Maſhes. The Cure.

CHAP. XVI.

Of the breaſt pain, or any other ſickneſſe proceeding from the heart, as the Anticor, and ſuch like.

THeſe Diſeaſes proceed from too rank feeding, and much fatneſſe; the ſigns are a faulting in his fore-legs, a diſableneſſe to bow down his neck, and a trembling over all his body. The cure is, to let him bloud, and give him three mornings together two ſpoonfulls of *Diapent* in a quart of Ale or Beer, for it alone putteth away all infection from the heart. The Cure.

CHAP. XVII.

Of tyred Horſes.

IF your Horſe be tyred either in Journying or any Hunting match, your beſt help for him is to give him warm Urine to drink, and letting him bloud in the mouth to ſuffer him to lick up and ſwallow the ſame: Then if you can come where any nettles are, to rub his mouth and ſheath well therewith: then gently to ride him untill you come to your reſting place, where ſet him up very warm, and before you go to bed give him five ſpoonfulls of *Aqua vita* to drink and as much provinder as he will

will eat. The next morning rub his legs with ſheeps foot oyle, and it will bring freſh nimbleneſſe unto his ſinews.

CHAP. XVIII.

Of diſeaſes in the ſtomack, as ſurfeits, loathing of meat or drinke, or ſuch like.

IF your horſe with the glut of provender, or eating raw food, have given ſuch offence to his ſtomack that he caſteth up all he eateth or drinketh, you ſhall firſt give him a comfortable drench, as *Diapente*, or *Treapham'con* in Ale or Beer; and then keeping him faſting, let him have no food but what he eateth out of your hand which would be bread well bakt and old, and after every two or three bits a lock of ſweet hay: and his drinke would be onely new milk till his ſtomack have gotten ſtrength and in a bag you ſhall commonly hang at his noſe ſowre brown bread ſteept in vinegar, at which he muſt ever ſmell, and his ſtomack will quickly come again to his firſt ſtrength.

CHAP. XIX.

Of Foundring in the body.

FOundring in the body is of ſurfeits the mortalleſt and ſooneſt gotten: it proceedeth from intemperate riding a horſe when he is fat, and then ſuddainly ſuffering him to take cold; then waſhing a fat horſe, there is nothing ſooner bringeth this infirmity. The ſigns are ſadneſſe of countenance, ſtaring hair, ſtiffneſſe of limbs, and loſſe of belly: and the cure is only to give him wholſome ſtrong meat, as bread of clean beans, and warm drink, and for two or three mornings together a quart of Ale brewed with Pepper and Cinamon, and an ounce of *London treacle*.

The Cure.

CHAP. XX.

Of the Hungry evill.

THe hungry Evil is an unnaturall and over haſty greedineſſe in a horſe to devour his meat faſter than he can chew it, and is only known by his greedy ſnatching at his meat, as if he would devour it whole: The Cure is, to give him to drink milk and wheat meal mixt together by a quart at a time, and to feed him with provender by a little and a little till he forſake it.

The Cure.

CHAP.

CHAP. XXI.

Of the diſeaſes of the Liver, as Inflammations, Obſtructions, and conſumptions.

THE Liver, which is the veſſel of blood, is ſubject to many diſeaſes, according to the diſtemperature of the blood, and the ſigns to know it, is a ſtinking breath, and a mutual looking towards his body: and the cure is, to take *Ariſtologia longa*, and boyl it in running water, till the half part be conſumed, and let the horſe drinke continually thereof, and it will cure all evils about the Liver, or any inward conduits of blood.

CHAP. XXII.

Of the diſeaſes of the Gall, and eſpecially of the Yellows.

FRom the over-flowing of the Gall, or rather want of the Gall, which is the veſſel of choller, ſpring many mortal diſeaſes, eſpecially the Yellows, which is an extream faint mortal ſickneſſe, if it be not prevented betime: the ſigns are yellowneſſe of the eyes and skin, and chiefly underneath his upper lippe next unto his fore teeth, a ſudden and faint falling down by the high way, or in the ſtable, and an univerſal ſweat over all the body. The cure is, firſt to let the horſe blood in the neck, in the mouth and under the eyes, then take two-penny-worth of *Saffron*, which being dryed and made into fine powder, mix it with ſweet butter, and in manner of a pill give it in balls to the horſe, three mornings together; let his drink be warm, and his hay ſprinkled with water: A quart of a ſtrong decoction of *Selladine* helps it alſo. The Cure.

CHAP. XXIII.

Of the ſickneſſe of the Spleen.

THe ſpleen which is the veſſel of melancholly; when it is over-chardged therewith grows painfull, hard and great, in ſuch ſort, that ſometimes it is viſible. The ſigns to know it, is much groaning, haſty feeding, and a continual looking to his left ſide only. The cure is *Agrimony*; and boyl a good quantity of it in the water, which the horſe ſhall drink; and chopping The Cure.

the leaves ſmall; mixe them very well with ſweet *May butter*, and give the horſe two or three good round balls thereof, in the manner of pills.

CHAP. XXIV.

Of the Dropſie or evill habit of the body.

THe Dropſie is that evill habit of the body, which ingendred by ſurfeits and unreaſonable labour, altereth the colours and complexions of horſes, and changeth the hairs in ſuch an unnaturall ſort, that a man ſhall not know the beaſt, with which he hath been moſt familiar. The cure is, to take a handfull or two of *Wormwood*, and boyling it in Ale or Beer, a quart or better, give it the horſe to drink luke warme, morning and evening, and let him only drink his water at noon time of the day.

The Cure.

CHAP. XXV.

Of the Collicke, Belly-ake, and Belly bound.

THe Chollicke or Belly-ake is a fretting, gnawing, or ſwelling of the belly; or great bag, proceeding from windy humours, or from eating of green corn, or pulſe, hot grains without ſalt or labour, or bread dow bak't; and belly bound, is when a horſe cannot dung. The cure of the Chollick or belly ake, is, to take good ſtore of the hearb *Dill*, and boyl in the water you give your horſe to drink; but if he cannot dung, then you ſhall boyl in his water good ſtore of the hearb called *Fenugreek*, and it will make him looſe without danger or hurting.

The Cure.

CHAP. XXVI.

Of the Laxe or bloody-Flix.

THe Laxe or Bloody-flix, is an unnaturall looſeneſſe in a horſes body, which not being ſtayed, will for want of other excrement, make a horſe void blood onely. The cure is, take a handfull of the hearb *Shepheards purſe*, and boyl it in a quart of ſtrong Ale, and when it is luke-warme, take the ſeeds of the hearb *Woodroſe* ſtampt, and put it therein, and give it the horſe to drink.

The Cure.

CHAP.

CHAP. XXVII.

Of the falling of the Fundament.

THis commeth through miſlike and weakneſſe, and the cure is: Take *Town-creſſes*, and having dryed them to powder, with your hand put up the fundament, and then ſtrow the powder thereon; after it, lay a little honey thereon, and then ſtrow more of the powder, mixt with the powder of *Comin*, and it helpeth. The Cure.

CHAP. XXVIII.

Of Bots and Worms of all ſorts.

THe Bots and gnawing of Worms, is a grievous pain, and the ſignes to know them, is the horſes oft beating his belly and tumbling and wallowing on the ground, with much deſire to lye on his back. The cure is, take the leaves chopt of the hearb *Saven*, and mixe it with Honey and Butter, and make two or three balls thereof, make the horſe ſwallow them down, and it will help him. The Cure.

CHAP. XXIX.

Of the pain in the Kidneys, pain-piſs, or the Stone.

ALL theſe diſeaſes ſpring from one ground, which is only gravel and hard matter gathered together in the Kidneyes, and ſo ſtopping the conduits of Urine: the ſigns are only that the horſe will often ſtrain to piſs, but cannot. The cure is to take a handfull of *Maiden-hair*, and ſteep it all night in a quart of ſtrong ale, and give it the horſe to drink every morning till he be well: this will break any ſtone whatſoever in a horſe. The Cure.

CHAP. XXX.

Of the Strangullian.

THis is a ſoreneſſe in the horſes yard, and a hot burning ſmarting when he piſſeth: the ſigns are, he will piſſe oft, yet but a drop or two at once. The cure is, to boyl in the water which he drinketh, good ſtore of the hearb *Mayth*, or *Hogges-fennel*, and it will cure him. The Cure.

CHAP. XXXI.

Of pissing blood.

THis commeth with over-travelling a horse, or travelling a Horse sore in the winter when he goeth to grasse. The Cure is, take *Aristolochia longa*, a handfull; and boyl it in a quart of ale, and give it the horse to drink luke-warm, and give him also rest.

The Cure.

CHAP. XXXII.

Of the Colt-evill, mattering of the yard, falling of the yard, shedding the seed.

ALL these evils proceed from much lust in a horse; and the cure is, the powder of the herb *Avis*, and the leaves of *Buttony*; stamp them with white wine, to a moyst salve, and annoynt the sore therewith, and it will heal all imperfection in the yard: but if the horse shed his seed, then beat Venice Turpentine and Sugar together, and give him every morning a good round ball thereof, untill the flux stay.

The Cure.

CHAP. XXXIII.

Of the particular diseases in Mares, barrennesse, consumption, rage of love, casting Foals, hardnes to foal, and how to make a Mare cast her Foal.

IF you'l have your Mare barren, let good store of the herb *Agnus castus* be boyled in the water she drinketh: if you would have her fruitful, then boyl good store of *Mother-wort* in the water which she drinketh: If she loose her belly, which sheweth a consumption of the womb, you shall then give her a quart of Brine to drink, *Mugwort* being boyled therein. If your Mare through pride of keeping grow into extream lust, so that she will neglect her food, through the violence of her fleshy appetite, as it is often seen amongst them, you shall house her for two or three dayes, and give her every morning a ball of Butter and *Agnus Castus* chopt together, if you would have a Mare to cast a Foal, take a handfull of *Buttony*; and boyl it in a quart of ale, and it will deliver her presently. If she cannot Foale, take the herb *Horsemint*, and either dry it or stamp it, and take the pow-

der

der or the juyce, and mixe it with ſtrong ale; and give it the Mare and it will help her: If your Mare from former bruiſings or ſtrokes be apt to caſt her Foals, as many are, you ſhall keep her at graſſe very warme, and once in a week, give her good warme maſh of drink: this ſecretly knitteth beyond expectation.

CHAP. XXXIV.

Of drinking venome, as Horſe-leaches, Hens dung, or ſuch like.

IF your Horſe have drunk Horſe-leaches, hens dung, feathers, or ſuch like venemous thing, which you ſhall know by his panting, ſwelling, or ſcouring, you ſhall take the hearb *Sow thiſtle*, and drying it, beat it into powder, and put three ſpoonfuls thereof into a quart of ale, and give it the horſe to drink.

CHAP. XXXV.

Of Suppoſitaries, Glyſters, and Purgations.

IF your horſe by ſickneſſe, ſtrict dyet, or too vehement travel grow dry and coſtive in his body as it is ordinary, the eaſieſt means in extreamity to help him, is to give him a ſuppoſitary: the beſt of which is, to take a candle of four in the pound, and cut off five inches at the bigger end, and thruſting it up a good way with your hand into his fundament, preſently clap downe his tayle, and hold it hard to his tuell, a quarter of an hour, or half an hour: and then give him leave to dung: but if this be not ſtrong enough; then you ſhall give him a Glyſter, and that is take four handfulls of the hearb *Aniſe*, and boyl it in a pottle of running water, till half be conſumed, then take the decoction, and mixe it with a pint of Sallet-oyl; and a pretty quantity of ſalt, and with a glyſter-pipe give it, at his tuel. But if this be too weak, then give him a purgation thus: Take twenty Raiſins of the Sun without ſtones, and ten Figs ſlit, boyl them in a pottle of running water till it come to a jelly; then mixe it with the powder of Lycoras, Anniſeeds, and Sugar-candy, till it be like paſte; then make it into round balls; and role it in ſweet butter, and ſo give it the horſe, to the quantity of three hen eggs. The Cure.

CHAP.

CHAP. XXXVI.

Of Neesings and Frictions.

THere be other two excellent helps for ſick horſes; as Frictions and Neesings: the firſt to comfort the outward parts of the body, when the vitall powers are aſtoniſhed: the other to purge the head when it is ſtopt with phlegme, cold or other thick humors. And of Frictions, the beſt is vinegar and Patch-greaſe melted together, and very hot chaſed into the horſes body againſt the hair. And to make a horſe neeſe, there is nothing better, than to take a bunch of Pellitory of Spain, and binding it unto a ſtick, thruſt it up a horſes noſtrils, and it will make him neeſe with out hurt or violence.

CHAP. XXXVII

Of diſeaſes in the eyes: as watry-eyes, blood-ſhotten eyes, dim eyes, moon eyes, ſtroke in the eye, wart in the eye, inflammation in the eye, Pearl, Pin, Web, or Haw.

UNto the eye belongeth many diſeaſes, all which have their true ſigns in their names, and as touching that which is watry, blood-ſhotten, dim, moon, ſtricken or inflamed, they have all one cure. The cure is, take Wormwood, and bear it in a Morter with the gall of a Bull, ſtrain it, and annoynt the horſes eyes therewith, and it is an approved remedy. But for the Wart, Pearl, or Pin or Web, which are evills grown in, and upon the eye to take them off, take the juyce of the herb Betin, and waſh his eyes therewith, and it will wear the ſpots away. For the Haw every Smith can cut it out.

The Cure.

CHAP. XXXVIII.

Of the Impoſtume in the ear, Pole-evill, Fiſtula, ſwelling after blood-letting, any gald back, canker in the Withers ſit faſt, Wens, Navel galls, or any hollow Ulcer.

THeſe diſeaſes are ſo apparent and common, that they need no further deſcription but their names, and the moſt certain cure is to take clay of a mud, or lome wall, without lime, the ſtraws and all, and boyling it in ſtrong vinegar, apply it playſter wiſe

The Cure.

wiſe to the ſore, and it will of its own nature ſearch to the bottome, and heal it, provided, that if you ſee any dead or proud fleſh ariſe, that then you either eat or cut it away.

CHAP. XXXIX.

Of the Vives.

FOr the Vives, which is an inflammation of the kirnels between the chap and the neck of the horſe; take Pepper one penny-worth, of *Swins greaſe* one ſpoonfull the juyce of a handfull of Rew, Vinegar two ſpoonfulls, mixe them together and then put it equally into both the horſes eares, and then tye them up with two flat laces, then ſhake the ears, that the medicine may go down, which done, let the horſe blood in the neck, and in the temple veins, and it is a certain cure.

CHAP. XL.

Of the ſtrangle, or any boyl, botch or other Impoſtume whatſoever.

ALL theſe diſeaſes are of one nature, being onely hard Byles or impoſtumes gathered together by evill humours, either between the chaps, or elſe where on the body. The cure is, take *Sothernwood*, and dry it to powder, and with Barley meal and the yolk of an Egge make it into a ſalve, and lay it to the Impoſtume and it will ripen it, break it, and heal it. The Cure.

CHAP. XLI.

Of the Canker in the Noſe, or any other part of the body.

TO heal any Canker in what part ſoever it be: Take the juyce of *Plaintain*, as much *Vinegar*, and the ſame weight of the powder of *Allom*; and with it annoynt the ſore twice or thrice a day, and it will kill it and cure it.

CHAP. XLII.

Of ſtanching of blood, whether it be at the Noſe, or proceed from any wound.

IF your Horſe bleed violently at the noſe, and will not be ſtaid, then you ſhall take *Bittony*, and ſtamp it in a morter with bay-ſalt, or other white Salt, and ſtop it into the horſes noſe, or apply

ply it to the wound, and it will ſtanch it: but if you be ſuddenly taken; as riding by the high way or otherwiſe, and cannot get this hearb, you ſhall take any woollen cloath, or any felt hat, and with a Knife ſcrape a fine Lint from it, and apply it to the bleeding place, and it will ſtanch it preſently.

CHAP. XLIII.

Of the diſeaſes in the mouth, as bloudy Rifts, Ligs, Lampas, Camery, Inflammation, Tongue-hurt, or the Barbs.

IF you find any infirmiry in your horſes mouth, as the bloody rifts, which are chaps or rifts in the palate of the horſes mouth, the ligs, which are little puſtels or bladders within the horſes lips: the Lampaſs, which is an exreſſion of fleſh above the teeth; the Camery, which is little warts in the roof of the mouth: inflammations, which is bliſters: barbs, which are two little paps under the tongue, or any hurt on the tongue by bit or otherwiſe, you ſhall take the leaves of wormwood, and the leaves of *Shirwit*, and beat them in a morter with a little hony, and with it annoynt the ſores, and it will heale them: as for the Lampaſs, they muſt be burnt away, which the ignoranteſt Smith can eaſily do.

The Cure.

CHAP. XLIV.

Of pain in the teeth, or looſe teeth.

FOr any pain in the teeth, take Bettony and ſeeth it in Ale or Vinegar till a half part be conſumed, and waſh all the gums therewith: but if they be looſe, then only rub them with the leaves of *Elecampane* or *Horſechelm* after they have been let blood, and it will faſten them.

CHAP. XLV.

Of the Crick in the neck.

FOr the Crick in the neck, you ſhall firſt chaſe it with the Friction before ſpecified and then annoynt and bath it with ſope and vinegar, boyled together.

CHAP.

CHAP. XLVI.

Of the falling in the Creſt, mangineſſe of the Main, or ſhedding of the hair.

ALL theſe diſeaſes proceed from poverty, miſſike, or over-riding; and the beſt cure of the falling of the Creſt, is bloud-letting, and proud keeping, with ſtore of meat; for ſtrength and fatneſſe ever will raiſe up the Creſt, but if the main be maingy, you ſhall annoynt it with butter, and Brimſtone, and if the hair fall away, then take Southernwood, and burn it to aſhes, then take thoſe aſhes, and mixing them with common oyle, annoynt the place therewith, and it will bring hair preſently, ſmooth, thick, and fair.

CHAP. XLVII.

Of pain in the Withers.

A Horſes Withers are ſubject to many griefs and ſwellings which proceed from cold humours, ſometimes from evill ſaddles, therefore if at any time you ſee any ſwelling about them you ſhall take the hearb Hearts-tongue and boyl it with the oyl of Roſes, and very hot apply it to the ſore, and it will aſſwage it, or elſe break it and heal it.

CHAP. XLVIII.

Of ſwaying the back, or weakneſs in the back.

THeſe two infirmities are dangerous, and may be eaſed, but never abſolutely cured: therefore where you find them, take Colewort and boyl them in oyl, and mixing them with a little bean meal charge the back, and it will ſtrengthen it.

CHAP. XLIX.

Of Itch in the tayl, or of the generall Scab and mangineſſe, or of the Farcy.

FOr any of theſe diſeaſes, take freſh greaſe, and yellow Arſnick mixe them together, and where the Mangineſſe or Itch is, there rub it hard in, the ſore being made raw: But if it be for Farcy then with a Knife ſlit all the Knots, both hard & ſoft, & then rub in the medicine; which done, tye up the horſe, ſo as he

may not come to bite himſelf, and then after he hath ſtood two or three hours, take old piſſe and ſalt boyl'd together, provided alwayes that you firſt let him bloud, and take good ſtore from him, and alſo give him every morning a ſtrong ſcouring, or a ſtrong purge, both which are ſhewed before.

CHAP. L.

Of any halting which commeth by ſtrain, or ſtroak either before or behind from the ſhoulders or hippe, down to the hoof.

THere be many infirmities which make a horſe halt, as pinching the ſhoulder, wrench in the ſhoulder, wrench in the nether joynt, ſplatting the ſhoulder, ſhoulder pight, ſtrains in the joynts, and ſuch like, all which ſince they happen by one accident, as namely, by the violence of ſome ſlip or ſtrain, they may be cured by one medicine, and it is thus. After you have found where the grief is, as you may do by griping and pinching every ſeverall member, then where he moſt complaineth, there is his moſt grief. You ſhall take (if the ſtrain be new) Vinegar, Bole-armoniack, the whites of Egs, and bean flowre, and having beaten them to a perfect ſalve, lay them very hot to the ſore place, and it will cure it, but if the ſtrain be old, then take Vinegar and butter, and melting them together with wheat bran, make it into a pultis, and lay it to the ſore as hot as may be, and it will without doubt take away the grief.

CHAP. LI.

Of foundring in the feet.

OF foundring there be two ſorts, a dry and a wet: the dry foundring is incurable, the wet is thus to be helpt. Firſt, pare all the ſoals of his feet ſo thin, that you may ſee the quick, then let him bloud at every toe, and let them bleed well, then ſtop the vein with tallow, and Roſen, and having tackt hollow ſhooes on his feet, ſtop them with Bran, Tarre, and Tallow, as boyling hot as may be, and renew it once in two dayes, for a week together, then exerciſe him much, and his feet will come to their true uſe and nimbleneſs.

CHAP.

CHAP. LII.

Of the Sple Curb, Bode-ſpaven, or any knobby or bony excreſſion or Ring-bone.

A Splent is a bony excreſſion under the Knee or the fore-legge the Curb is the like behind the hinder hough, the Spaven is the like on the inſide of the hinder hough, and the Ring-bone is the like on the cronet of the hoof. And the cure is, firſt upon the top of the excreſſion, make a ſlit with your knife the length of a Barly-corn, or a little more, and then with a fine cornet raiſe the skin from the bone, and having made it hollow, the compaſſe of the excreſſion, and no more; take a little lint, and dip it into the oyl of *Origanum*, and thruſt it into the hole and cover the knob, and ſo let it bridle till you ſee it rot, and that natnre caſteth out both the medicine and the core. As for the Ring-bone you ſhall need to ſcariſie and annoynt it with the oyl onely.

CHAP. LIII.

Of the Malander, Selander, Pain-ſcratches, Mellet, Mules, Crown-ſcabs, and ſuch like.

FOr any of theſe Sorances, you ſhall take Verdigreaſe and ſoft greaſe, and grinding them together to an Oyntment, put it in a Box by it ſelf; then take Wax, hogges-greaſe, and Turpentine, of each alike, and being melted together, put that ſalve into another Box: then when you come to dreſs the ſore; after you have taken off the ſcab and made it raw, you ſhall annoynt it with your green ſalve of *Verdigreaſe* and freſh greaſe onely for two or three dayes; it is a ſharp ſalve, and will kill the cankerous humor: then when you ſee the ſore look fair, you ſhall take two parts of the yellow ſalve, and one part of the green ſalve, and mixing them together, annoynt the ſore therewith till it be whole making it ſtronger or weaker as you ſhall find occaſion.

CHAP. LIV.

Of an upper Attaint, or nether Attaint, or any hurt by over-reaching.

THeſe attaints or ſtrokes or cuts by over-reaching either on

the back ſinew of the fore-legge, on the heels or neither joynts and may be ſafely healed by the ſame former medicine and mean which healeth the Malander or Selander, in the former chapter: only for your over-reaches, you ſhall before you apply your ſalve lay the ſore plain and open, without hollowneſſe, and waſh it with beer and ſalt, or vinegar and ſalt.

CHAP. LV.

Of the infirmities of hoofs, as falſe quarters, looſe hoofs, caſting hoofs, hoof bound, hoof running, hoof brittle, hoof hurt, hoof ſoft, hoof hard, or generally to preſerve hoofs.

THe hoof is ſubject to many miſeries: as firſt to falſe quarters, which commeth by pricking, and muſt be helpt by good ſhooing, where the ſhooe muſt bear on every part of the foot, but upon the falſe quarters only. If the hoof be looſe, annoynt it with pitch of *Burgundy*, and it will knit it: if it be clean caſt off, then pitch of *Burgundy* and tallow molten together, will bring a new; if it be bound or ſtrained, it muſt be very well opened at the heels, the ſoal kept moyſt, and the cronet annoynted with the fat of Bacon and Tar. If the fruſh of the feet run with ſtinking matter, it muſt be ſtopt with Soot, Turpentine, and Bolear-*moniack* mixt together: if it be brittle or broken, then annoynt it with pitch and Linſeed Oyle, molten to a ſoft ſalve; if it be ſoft then ſtop it with Sope, and the aſhes of a burnt Felt mixt together; if the hoofs be hard, lay hot burning cinders upon them, and then ſtop them with tow and tallow: and generally for the preſerving of all good hoofs, annoynt them dayly with the ſward or rind of fat Bacon.

CHAP. LVI.

Of the blaine-praven, or hough-bony, or any other unnaturall ſwelling, from what cauſe ſoever it proceedeth.

THeſe two ſorances, or puſtels, or ſoft round ſwellings, the firſt on the inſide of the hinder hough, and the other on the very huckle on the hough behind, they are ſoft and very ſore, and the cure is: firſt to take up the vein above, and let it bleed only

The Cure.

from

from below, then having knit it faſt with two ſhoo-makers ends on both ſides the flit, cut the vein in two pieces: then take Linſeed and bruiſe it in a morter, then mixe it with Cow-dung and heat it in a frying pan, and ſo apply it to the ſwelling only, and if it break and run, then heal it with a playſter of pitch, and the horſe ſhall never be troubled with Spaven more: but if the ſwelling come by ſtrain or bruiſe, then take patch-greaſe, and melting it, annoynt the ſore therewith, holding a hot Iron near it to ſink in the greaſe, then fold a linnen cloath about it, and it will aſſwage all ſwellings whatſoever.

CHAP. LVII.

Of Wind-galls.

THeſe are little blebs, or ſoft ſwellings on each ſide the Fetlock, procured by much travell on hard and ſtony wayes. The cure is to prick them and to let out the Jelly, and then dry up the ſore with a playſter of pitch. The Cure.

CHAP. LVIII.

Of enterfairing or Shackle-gall, or any gallings.

ENterfairing is hewing one legge on another, and ſtriking off the skinne, it proceedeth from weakneſſe or ſtraitneſſe of the horſes pace; and Shackle-gall is any gall underneath the Fetlock. The cure is, to annoynt them with Turpentine and Verdigreaſe mixt together, or Turpentine alone, if it rankle not too much. The Cure.

CHAP. LIX.

Hurts on the Cronet, as the Quitter-bone, or Matlong.

THe Quitterbone it a hollow ulcer on the top of the cronet, and ſo is the Matlong, and the cure is: Firſt to taint it with Verdigreaſe untill you have eaten out the core, and made the wound very clean; then you ſhall heal it up with the ſame ſalves that you heal the Scratches. The Cure.

CHAP.

CHAP. LX.

Of wounds in the foot, as gravelling, pricking, figge, retait or cloying.

IF your horſe have any woumnd in his foot, by what miſchance ſoever, you ſhall firſt ſearch it, and ſee that it be clear of any nayle, poynt, or other ſplint to annoy it; then waſh it very well with white Wine and Salt, and after taint it with the Oyntment called *Ægyptiacum*, and then lay hot upon the taint with *Flax-hurds*, *Turpentine*, *Oyl* and *Wax* mingled together, and annoynt all the top of the hoof and cronet with *Bole ammoniack* and *Vinegar*: do this once a day untill the ſore be whole.

CHAP. LXI.

To draw out a Stub, or Thorn.

TAke the hearb Dettony, and bruiſe it in a morter with *Black-ſoap*, and lay it to the ſore, and it will draw out the ſplent, iron, thorn, or ſtub.

CHAP. LXII.

Of the Aubury, or Tetter.

THe *Aubury* is a bloody wart on any part of the horſes body and the Tetter is a Cankerous ulcer like it: The cure of both is with a hot iron to ſear the one plain to the body, and to ſcarifie the other; then take the juyce of *Plantine*, and mixe it with *Vinegar*, *Hony*, *and the powder of Allome*, and with it annoynt the ſore till it be whole.

The Cure.

CHAP. LXIII.

Of the Cords or String-halt.

THis is an unnaturall bending of the ſinews; which imperfection, a horſe bringeth into the world with him: and therefore it is certaine it is incurable, and not painfull, but only an eye ſore, yet the beſt way to keep it from worſe inconvenience, is to bath his limbs in the decoction of *Coleworts*.

CHAP.

CHAP. LXIV.

Of ſpur-galling, or fretting the ſkin, and hair.

FOr this there is nothing better then piſs and ſalt, with which waſh the ſore dayly.

CHAP. LXV.

Of healing any old ſore or wound.

FReſh butter, and the hearb *Ameos*, chops and beaten together to a ſalve will heal any wound or any old ſore.

CHAP. LXVI.

Of ſinews being cut.

IF the horſes ſinews be cut, take the leaves of wild *Nepe* or *Woodbine*, and beating them in a morter with *May butter*, apply it to the ſore, and it will knit the ſinews.

CHAP. LXVII.

Of eating away any dead fleſh.

TAke *Sinbwort*, and lap it in a red dock leaf, and roaſt it in the hot cinders, and lay it to the ſore, and it will eat away any dead fleſh. So will Verdigreaſe, burnt allom, or lime. The Cure.

CHAP. LXVIII.

Of Knots in the joynts.

PAtch-greaſe applyed as is before ſhewed for ſwellings, will take away any hard Knots in the fleſh, or upon the ſinewes.

CHAP. LXIX.

Of venemous wounds, as biting with a mad Dog, tusks of Bores, Serpents or ſuch like.

FOr any of theſe mortall or venomous wounds, take *Yarrow*, *Calamint*, and the grains of Wheat, and beat them in a morter with water of *Sothernwood*, and make it into a ſalve, and lay it to the ſore, and it will heal it ſafely.

CHAP. LXX.

Of Lice or Nits.

THis filthineſſe of Vermine is bred in a horſe through unnaturall diſlike and poverty: the cure is, take the juyce of *Beets* and

and *Staveſakr*, beaten together, and with it annoynt the Horſes Body over, and it will make him clean.

CHAP. LXXI.

Of defending a Horſe from flyes.

TAke the juyce of Pellitory of Spain, and mixing it with milke annoynt the Horſes belly therewith, and no flyes will trouble him.

CHAP. LXXII.

Of broken bones, or bones out of joynt.

AFter you have placed the bones in their true places, take the Feroſmund, and beat it in a morter with the oyle of Swallows, and annoynt all the members; then ſplent it and role it up, and in fifteen dayes the bones will knit and be ſtrong.

CHAP. LXXIII.

Of drying up ſores when they be almoſt whole.

ALLome burnt, unſlackt Lime, the aſhes of an old ſhooe-ſole burnt, or Oyſter-ſhels burnt; any of theſe ſimply by themſelves, will dry up any ſore, though never ſo moyſt.

CHAP. LXXIV.

A moſt famous Receit to make a Horſe that is lean, and full of inward ſickneſſe, ſound and fat in fourteen dayes having been often approved of.

TAke of wheat meale ſix pound, Anniſeeds two ounces, Commin ſeeds ſix drammes, Carthamus one dramme and a half, Fenegreek ſeeds one ounce two drammes, Brimſtone one ounce and a half, Sallet oyl one pint, Honey one pound and a half, white Wine four pints, this muſt be made into paſte, the hard ſimples being pounded into powder, and finely ſearſt, and then kneaded together, and ſo made into balls as big as a mans fiſt, then every watering conſume one of thoſe balls into his cold water which he drinketh for morning and evening for fifteen dayes together, and if at the firſt he be dainty to drink the water yet care not, but let him faſt till he drink it, and after he begins to take it, he will drink it with great greedineſs.

CHAP.

CHAP. LXXV.

How to make a white Starre.

SLit the Horſes fore-head the length of your Starre, and then raiſe the skin up with a crooct, and put in a plate of Lead as bigge as the Starre, and let it remain ſo two or three dayes together; and then let it out and preſſe down the skin with your hand, that hair will fall away, and white will come in the place: or to ſcald the face or skinne with a ſower Apple roaſted, will bring white haire: But to make a black Star, or a red Star in a Horſes fore-head, I refer it for you to look and approve of my *Maſter-peece*, which belongeth onely to that for to be exactly diſcourſed of, that being onely a generall cure of all Cattell.

The end of the Horſe.

The generall Cure and Ordering of the Bull, Cow, Calfe, or Oxe.

CHAP. I.

Of the Bull, Cow, Calf, or Oxe, their ſhape and breed, uſe, choice, and preſervation.

FOr as much, the Male of all Creatures are the principal in the breed and generation of things, and that the fruit which iſſueth from their Seed participateth moſt with their outward ſhapes, and inward qualities, I think fitteſt in this place, where I intend to treat of Horned Cattell and Neat, to ſpeak firſt of the choice of a fair Bull, being the breeders principalleſt inſtrument of profit. You ſhall underſtand then, that of our Engliſh Cattell, (for I will not ſpeak of thoſe in *Italy*, and other Lorraine Countries, as other Authors do, and forget mine own) the beſt are bred in *Yorke-ſhire*, *Darby-ſhire*, *Lincaſhire*, *Stafford-ſhire*, *Lincoln-ſhire*, *Glocester-ſhire*, and *Somerſet-*

The Countrye for breed.

ſhire, though they were bred in *York-ſhire*, *Darby-ſhire*, *Lanca-ſhire*, and *Staffor d-hire*, are generally all black of colour, and though they whoſe blackneſſe is pureſt, and their hairs like velvet, are eſteemed beſt; they have exceeding large horns, and very white with black tips; they are of ſtately ſhape, big, round, and well huckled together in every member, ſhort joynted and moſt comely to the eye, ſo that they are eſteemed excellent in the Market: thoſe in *Lincoln-ſhire* are for the moſt part Pide, with more white then the other colours, their horns little and crooked, of bodies exceeding tall, long, and large, lean and thin thighed, ſtrong hooved, not apt to ſurbait, and are indeed fitteſt to Labour and draught. Thoſe in *Somerſet-ſhire*, and *Glocester-ſhire*, are generally of a blood red colour, in all ſhapes like unto thoſe in *Lincoln-ſhire*, and fitteſt for their uſes. Now to mixe a race of theſe and the black ones together is not good, for their ſhapes and colours are ſo contrary, that their iſſues are very uncomely: therefore, I would with all men to make their breeds, either ſimply from one and the ſame kind, or elſe to mixe *York-ſhire*, with *Staffordſhire*, with *Lancaſhire*, or *Darby-ſhire*, with ons of the black races, and ſo likewiſe *Lincoln-ſhire*, with *Somerſet-ſhire*, or *Somerſet-ſhire* with *Glocester-ſhire*.

Of not mixing and mixing of races.

Now for the ſhapes of your Bull; he would be of a ſharp and quick countenance, his horns the larger the better, his neck fleſhy, his belly long and large, his fore-head broad and curled, his eyes black and large, his ears rough within, and hair like velvet, his muzzell large and broad at the upper lip, but narrow and ſmall at the neather, his noſtrils crooked within, yet wide and open; his dew-lap extending from his neather lip down to his fore-booths, large ſide, thin and hairy, his breaſt rough and big, his ſhoulders large, broad, and deep; his ribs broad and wide, his back ſtraight and flat, even to the ſetting on of his tayle, which would ſtand high, his huckle bones round and fair appearing, making his buttocks ſquare, his thighs round, his legs ſtrait and ſhort joynted, his Knees round and big, his hooſes or claws long and hallow, his tayl long and buſh-haired, his piſſe round and alſo well Haired. Theſe Buls as they are for breed, ſo they are excellently good for the draught, only they naturally draw better ſingle, like horſes, then in the yoke, like Oxen: the reaſon as I ſuppoſe being, becauſe they can hardly be matcht in an equal manner.

The ſhape of the Bull.

The uſe of the Bull.

Now

Now for the Cow, you ſhall chuſe her of the ſame Country with your Bull, and as near as may be of one colour, onely her bag or udder would ever be white, with four teats and no more, her belly would be round and large, her forehead broad and ſmooth, and all other parts ſuch as are before ſhewed in the male kind. Of the Cow and her ſhape.

The uſe of the Cow is two-fold, either for the Dairy or for breed: the Red Cow giveth the beſt milk, and the black Cow bringeth forth the goodlieſt Calfe. The young Cow is the beſt for breed, yet the indifferent, old are not to be refuſed. That Cow which giveth milk longeſt is beſt for both purpoſes, for ſhe which giveth milk long, dry, loſeth halfe her profit, and is leſſe fit for teeming: for commonly they are ſubject to feed, and that ſtraineth the Womb or Matrix. Of her uſe.

Now for calves: there are two wayes of breeding them, the one to let them run with their Dams all the year, which is beſt and maketh the goodlieſt beaſt: the other to take them from their Dams, after their firſt ſucking, and ſo bring them up upon the finger, with ſloten milk, the cold only being taken away and no more; for to give a young Calfe hot milk, is preſent death, or very dangerous. If your Calf be calved in the five dayes after the change, which is called the *Prime*, do not rear it, for moſt aſſuredly it will have the Sturdy, therefore preſerve it only for the Butcher; alſo when you preſerve thoſe male Calves, which ſhall be Buls, then geld the reſt for Oxen, and the younger they are gelt the better: the beſt time for rearing of Calves is from *Michaelmas* till *Candlemas*. A Calfe would be nouriſhed with milk twelve weeks, onely a fortnight before you wean it from milk, let the milk be mixt with water. After your Calfe hath drunk one moneth, you ſhall take the fineſt, ſweeteſt, and ſofteſt hay you can get, and putting little wiſps into cloven ſticks, place them ſo as the Calfe may come to them and learn to eat Hay. After our Ladies day, when the weather is faire, you may turn your Calves to graſſe, but by no meanes let it be ranke, but ſhort and ſweet, ſo that he may get it with ſome labour. Of Calves, and their nouriſhing. Obſervations.

Now of the Oxe: you ſhall underſtand that the larger are the beſt and moſt profitable, both for draught or feeding, for he is the ſtrongeſt to indure labour, and beſt able to containe both fleſh Of the Oxe, and his uſe.

and tallow. Now for his shape it differeth nothing from that of the Bull, onely his face would be smooth, and his belly deeper. That Oxe is fittest for the yoke which is of gentle nature, and most familiar with the Man. In matching your Oxen for the yoke, let them as near as may be, be of one height, spirit and strength, for the stronger will ever wrong the weaker, and the duller will injure him that is of freer spirit, except the driver be carefull to keep the dull Oxe to his labour. Oxen for the yoke would by no means be put beyond their ordinary pace: for violence in travell heats them, heat breeds fat fleits, and fattits those diseases which makes them unapt to feed, or for any other use of goodnesse. Your Oxe for the yoke will labour well with Barly-straw, or Peasse-straw, and for blend fodder, which is Hay and Straw mixed together, he will desire no better feeding.

Of his food for labou.

Now for your Oxe to feed, he would as much as might be, be ever of lusty and young years, or if old, yet healthfull and bruised, which you shall know by a good taile, and a good pyzell, for if the hair of one or both be soft, then he is a waster, and he will be long in feeding. If you do see the Oxe doth lick himself all over, it is a good sign that he is market-able and well fed, for it shews soundnesse, and that the beast taketh a joy in himself: yet whilst he doth so lick himself he feedeth not, for his own pride hindreth him, and therefore the Husbandman will lay the Oxes own dung upon his hide, which will make him leave licking and fall to his food. Now if you go to chuse a fat beast you shal handle his hindmost rib, and if it be soft and loose, like down, then it shews the Oxe is outwardly well fed: so doth soft huckle-bones, and a big natch round and knotty: if his cod be big and full, it shews he is well-tallowd, and so doth the crop behind the shoulders: if it be a Cow, then handle her navel, and if that be big, round, and soft, surely she is well tallowed. Many other observations there are, but they be so well known, and common in every mans use, that they need no curious demonstration.

Oxen to feed for the Butcher.

Now for the preservation of these Cattell in good and perfect health, it shall be meet that for the young and lusty, and indeed generally for all sorts, except Calves, to let them blood twice in the year, namely the Spring and Fall, the Moon being in any of the

To preserve Cattell in health.

the lower ſigns, and alſo to give them to drink of the pickle of *Olives*, mixed with a head of *Garlick* bruiſed therein; and for your Calves, be only careful that they go not too ſoon to graſſe, and final danger is to be feared. Now notwithſtanding all a mans carefulneſſe, Beaſts dayly do get infirmities; and often fall into mortall extreamities: peruſe therefore theſe Chapters following, and you ſhall find cure for every particular diſeaſe.

CHAP. II.

Of the Fever in Cattell.

CAttell are moſt ſubject unto a Fever, and it cometh either from ſurfeit of blood, being raw, and muſty, or from flux of cold humours ingendred by old keeping: the ſigns are trembling, heavy eyes, a foaming mouth, and much groaning; and the cure is, *you ſhall let him blood, and then give him to drink a quart of Ale, in which is boyled three or four roots of Plantaine, and two ſpoonfuls of the beſt London Treacle, and let his Hay be ſprinkled with water.* The Cure.

CHAP. III.

Of any inward ſickneſſe in Cattell.

FOr any inward ſickneſſe or drooping in Cattel, take a quart of ſtrong Ale, and boyl it with a handful of Wormwood, and half a handful of Rew; then ſtrain it, and adde to it two ſpoonfuls of the juyce of Garlicke, and as much of the juyce of Houſeleek, and as much *London Treacle*; and give it the beaſt to drink, being no more but luke-warm.

CHAP. IV.

Of the Diſeaſe in the head, as the Sturdy, or Turning-ſoll.

THis diſeaſe of the Sturdy is known by a continuall turning about of the Beaſt in one place; and the cure is to caſt the Beaſt, and having made his feet faſt, to ſhit the upper part of his forehead croſſe-wiſe, about four inches each way, then cutting up the skin, and laying the skull bare, cut a piece out of the skull two inches ſquare, or more; then look, and next unto the paniele of the brain, you ſhall ſee a bladder lye full of water and blood, which The Cure.

which you ſhall very gently take out, and throw away; then annoint the place with warm freſh butter, turn down the skin, and with a needle and a little Red ſilke, ſtitch it cloſe together; then lay on a hot playſter of Oyle, Turpentine, Wax, and a little Rozen melted together with Flax-hurds; and ſo folding warm woollen cloath about the head, let the beaſt riſe, and ſo remain three or four dayes ere you dreſſe it again, and then heal it up like another wound, only obſerve in this cure, by no means touch the brain, for that is mortall, and then the help is both common, and moſt eaſie.

CHAP. V.

Of Diſeaſes in the eyes of Cattell, as the Haw, a Stroak, Inflammation, Weeping, or the Pinne or Webbe.

FOr any generall ſoreneſſe in the eyes of Cattell, take the water of *Eyebright*, mixt with the juyce of *Houſe leeke*, & waſh them therewith, and it will recover them: but if a Haw breed therein, then you ſhall cut it out, which every ſimple Smith can do. But for a Stroak, Inflammation, Pin or Web, which breeds excreſſions upon the eyes, take a new laid Egge, and put out half the white; then fill it up with Salt, and a little Ginger, and roſte it extream hard in hot Cinders; which done, beat it to powder ſhell and all; but before you roaſt it, wrap it in a wet cloath, and put of this powder into the beaſts eye, and it will heal and cure it.

CHAP. VI.

Of diſeaſes in the mouth, as barbs under the tongue, blain in the tongue, teeth-looſe, or tongue venomed.

THoſe Barbs, or paps which grow under the tongues of Cattell, and being inflamed do hinder them from feeding, you ſhall with a kneen pair of ſheers cut away cloſe by the fleſh, and if they bleed much, (as they will do if they be rank) you ſhall then with a hot red bodkin ſeare them, and drop on the top of the ſeared places a drop or two of Rozen and butter mixt together; but if they bleed not, then onely rub them with Sage and Salt, and they will heal. Now for the Blain on the tongue, of ſome called the Tin-blain, it is a bliſter which groweth at the roots

roots of the tongue, and commeth through heat of the ſtomack and much chafing, and is oft very mortall, for it will riſe ſo ſuddenly and ſo big that it will ſtop the wind of the Beaſt. The Cure is, to thruſt your hand into the mouth of the beaſt, and drawing out his tongue, with your nayl to break the bliſter, and then to waſh the ſore place with ſtrong brine, or Sage, Salt, and water: if you find more bliſters then one, break them all, and waſh them, and it is a preſent cure. Now for looſe teeth, you ſhall let the beaſt blood in his gums, and under his tayle, then waſh his chaps with Sage, and woodbine leaves, boyld in brine: laſtly, if the tongue be venomed, which you ſhall know by the unnaturall ſwelling thereof, you ſhall take Plantain, and boiling it with Vinegar and Salt, waſh the tongue therewith, and it will cure it. The Cure.

CHAP. VII.

Of diſeaſes in the neck, as being galled, bruiſed, ſwolne, out of joynt or having the Cloſh.

IF any Oxes neck be galled, bruiſed, or ſwolne with the yoke; take the leaves of round *ariſtoloch a*, and beating them in a Morter with tallow, or freſh greaſe, annoint the ſore place therewith, and it will not only heal it, but any ſtrain in the neck, even if the bone be a little diſordered. Now for the *Cloſh* or *Clowſe* which cauſeth a Beaſt to pill and looſe the hair from his neck, and is bred by drawing in wet and rainy weather: you ſhall take the aſhes of an old burnt ſhooe, and ſtrew it upon the neck, and then rub it over with Tallow and Turpentine mixt together.

CHAP. VIII.

Of the Peſtilence, Gargill, or Murrain in Beaſts.

THis Peſtilence or Murrain amongſt Beaſts is bred by divers occaſions; as from rankneſſe of blood, or feeding, from corruption of the ayr, intemperateneſſe of the weather, inundation of floods, or the infection of other Cattell: much might be ſaid of the violence and mortality thereof, which hath utterly unfurniſhed whole Countries: but to go to the cure, *you ſhall give to all your Cattell, as well the ſound as ſick, this medicine which never fayled to preſerve as many as have taken it*: take of old Urine a quart, and mixe it with a handfull of Hens dung diſſolved therein, and let your beaſt drink it. The Cure.

CHAP.

CHAP. IX.

Of the miſliking, or leanneſſe of Beaſts.

IF your Beaſt fall into any unnaturall miſslike or leanneſſe which you ſhall know by the diſcolouring of his hair; you ſhall then cauſe him firſt to be let blood, and after take ſweet butter, and beat it in a morter, with a little *Myrrhe*, and the ſhaving of *Ivory*, and being kept faſting, make him ſwallow down two or three balls thereof; and if it be in the Winter, feed him with ſweet Hay; if in the Summer, put him to graſſe.

CHAP. X.

Of the diſeaſe in the Guts, as Flux, Coſtiveneſſe, Cholick, and ſuch like.

IF your Beaſt be troubled with any ſore laxe, or bloody flux, you ſhall take a handfull of the ſeeds of *Wood-roſe*, and being dryed and beaten to powder, brew it with a quart of ſtrong Ale and give it the Beaſt to drink. But if he be too dry or coſtive in his body, then you ſhall take a handful of *Fennugreek*, and boyl it in a quart of Ale, and give him to drink; but for any chollick or belly-ake, or gnawing of the guts, boyl in the water which he drinketh good ſtore of oyle, and it will help him.

CHAP. XI.

Of piſſing of Blood.

IF your Beaſt piſſe blood, which cometh either of over-labouring, or of hard and ſowre feeding, you ſhall take *Shepherds-purſe*, and boyl it in a quart of red wine, and then ſtrain it, and put to it a little *Cinamon*, and ſo give it the Beaſt to drink.

CHAP. XII.

Of dropping noſtrils, or cold in the head.

IF your Beaſts noſtrils run continually, which is a ſign of cold in the head, you ſhall take *Butter* and *Brimſtone*, and mixing them together, annoint two Gooſe-feathers therewith, and thruſt them up into the noſtrils of the Beaſt, and uſe thus to doe every morning till they leave dropping.

CHAP.

CHAP. XIII.

Of any ſwelling in a Beaſt whatſoever.

IF your Beaſt have any outward ſwelling, bathe it with Oyl and Vinegar exceeding hot, and it will aſſwage it: but if the ſwelling be inward, then boyl round *Ariſtolochia* in his water.

CHAP. XIV.

Of the Worm in the Tayle.

THere is a Worm which will breed in the tayl of a Beaſt, and doth not onely keep him from feeding, but alſo eateth away the hair of the tayle and diſfigureth the Beaſt. The cure is, to waſh the tayle in ſtrong *Lye* made of *Urine* and *Aſh-wood-aſhes* and that will kill the Worm, and alſo heal and dry up the ſore. The Cure.

CHAP. XV.

Of any Cough, or ſhortneſſe of breath in Cattell.

IF your Beaſt be troubled with the Cough or ſhortneſſe of breath you ſhall give him to drink divers mornings together a ſpoonfull or two of Tarr, diſſolved in a quart of new milk, and a head of Garlick clean pill'd and bruiſed.

CHAP. XVI.

Of any Impoſtume, Bile, or Botch in a Beaſt.

IF your Beaſt be troubled with any Impoſtume, Bile, or Botch, you ſhall take Lilly roots and boyl them in milk till they be ſoft, ſo that you may make them like pap: then being very hot clap them to the ſore, and then when it comes to be ſoft, open it with a hot iron, and let out the filth, then heal it up with Tarr, Turpentine, and Oyl mixt together.

CHAP. XVII.

Of diſeaſes in the Sinewes, as weakneſſe, ſtiffeneſſe, or ſoreneſſe.

IF you find by the unnimble going of your Beaſt, that his ſinews are weak, ſhrunk or tender: Take *Mallows* and *Chickweed* and boyl them in the Dregs of Ale or in Vinegar, and being

very hot, lay it to the offended member, and it will comfort the ſinewes.

CHAP. XVIII.

Of the general ſcab, particular ſcab, itch, or ſcurf in Cattell.

IF your Beaſt be troubled with ſome few ſcabs here and there on his body, you ſhall onely rub them off, and annoint the place with black Sope and Tar, mixt together, and it will heal them. But if the Scab be univerſall over the body, and the ſcabs mixt with a dry ſcurf, then you ſhall firſt let the Beaſt bloud, after rub off the ſcabs and ſcurf till the skin bleed, then waſh it with old urine and green Copperas together, and after the bathing is dry annoynt the body with Bores greaſe, and Brimſtone mingled together.

CHAP. XIX.

Of the hide-bound, or dry skin in Cattell.

THis grief cometh of over-much labour and evil keeping, and above all other Beaſts your *Lincolnſhire* Oxen are ſubject unto it, the ſigns are a diſcoloured and hard skin, with much leanneſſe: the cure is, to let him bloud, and to give him to drink a quart of good ſtrong Ale brewed with *Myrrhe*, and the powder of *Bayberries*, or for want of Berries the Bay-tree leaves; and then keep him warm and feed him with Hay that is a little Mow-burnt, and onely looketh red, but is not duſty or mouldy, for that will get him an appetite to drink, and drinking will looſen his skin.

The Cure.

CHAP. XX.

Of the diſeaſes in the Lungs, eſpecially the Lung grown.

THe Lungs of a Beaſt are much ſubject to ſickneſſe, as may appear by much panting, and ſhortneſſe of breath, the ſigns being a continual coughing, but that which is before preſcribed for the Cough, will cure all theſe, onely for a Beaſt which is Lung-grown, or hath his Lungs grown to his ſide, which cometh through ſome extream drought taken in the Summer ſeaſon, and is known by the cough, hoarſe, or hollow coughing; you ſhall take a pint of *Tanners oze*, and mix it with a pint of new milk, and

and one ounce of brown Sugar Candy, and give it the Beast to drink, this hath been found a present cure; or to give him a ball as big as a mans fist, of Tar and Butter mixt together, is a very certain cure.

CHAP. XXI.

Of biting with a Mad Dog, or any other venemous Beast.

IF your Beast be bitten with a mad Dog, or any other venemous Beast, you shall take *Plantain*, and beat it in a Morter with *Bolearmoniack*, *Sanguis Draconis*, Barly meal, and the white of Egs, and playster-wise lay it to the sore, renewing it once in fourteen hours.

CHAP. XXII.

Of the falling down of the Pallate of a Beasts mouth.

LAbour and drought will make the Palate of a Beasts mouth to fall down, which you shall know by a certain hollow changeing in his mouth when he would eat, also by his sighing and a desire to eat but cannot. The ordinary cure is, you shall cast the Beast, and with your hand thrust it up; then let him bloud in the pallate, and annoint it with Hony and Salt; and then put him to grasse, for he may eat no dry meat. The Cure.

CHAP. XXIII.

Of any grief or pain in the hoof of a Beast, and of the Foule.

TAke *Mugwort*, and beat it in a Morter with hard *Tallow*, and apply it to the hoof of the Beast, and it will take away any grief whatsoever. But if he be troubled with that disease, which is called the *Foule*, and cometh most commely by treading in a mans ordure, it breedeth a soreness and swelling between the cloyes: you shall for the cure cast the beast, and with a Hay rope rub him so hard between the same, that you make him bleed, then annoint the place with *Tar*, *Turpentine*, and *Kitchin-fee*, mixt together, and keep him out of the dirt, and he will soon be whole. The Cure.

CHAP. XXIV.

Of bruiſings in general, on what part of the body ſoever they be.

TAke *Brooklime* the leſſe, and fry it with tallow, and ſo hot lay it to the bruiſe, and it will either expell it, or elſe ripen it, break it, and heal it, as hath been often approved.

CHAP. XXV.

Of ſwallowing down Hens-dung, or any poyſonous thing.

IF your beaſt have ſwallowed down Hens dung Horſe-leeches, or any other poyſonous thing, you ſhall take a pint of ſtrong Vinegar, and half ſo much Oyl: or ſweet butter, and two ſpoonfulls of *London-treacle*; and mixing them together on the fire give it the beaſt warm to drink, and it will cure him.

CHAP. XXVI.

Of killing Lice or Tickes.

BEaſts that are bred in Woods under dropping of Trees, or in barren and unwholeſome places are much ſubject to Lice, Tickes, and other Vermine. The cure whereof is to anoint their body with freſh Greaſe, Pepper, Staveſaker, and Quickſilver, beaten together untill the Quickſilver be ſlain.

The Cure.

CHAP. XXVII.

Of the Dewboln, or generall Gargill.

HOwſoever ſome of our *Engliſh* Writers are opioned, this *Dewboln* or generall *Gargill*, is a poyſonous and violent ſwelling, beginning at the neather part of the *Dewlap*; and if it be not prevented, the ſwelling will aſcend upward to the Throat of the Beaſt, and then it is incurable: therefore for the preſervation of your Beaſt, as ſoon as you ſee the ſwelling appear, caſt the Beaſt and ſlit the ſwelled place of the *Dewlap*, at leaſt four inches in length; then take a handfull or two of *Speare-graſſe*, or *Knot-graſſe*, and thruſting it into the wound, ſtitch it up cloſe; then annoynt it with *Butter* and *Salt*, and ſo let it rot and wear away of it ſelf: if you perceive that his body be ſwell'd, which is a ſigne that the poyſon is diſperſed inwardly, then it ſhall be

good

good to give him a quart of *Ale* and *Rew* boyl'd together, and ſo to chaſe him up and down well, both before and after.

CHAP. XXVIII.

Of the loſſe of the Cud.

A Beaſt will many times through careleſneſſe in chewing, loſe his Cud, and then mourn and leave to eat: The certain cure whereof is to take a little ſowre *Leaven* and *Salt*, and beating it in a morter with mans *Urine* and *Lome*, make a pretty big ball, and force him to ſwallow it down, and it will recover his Cud. The Cure.

CHAP. XXIX.

Of killing of all ſorts of Worms, either in the Oxe, Cow, or Calfe.

THere is nothing killeth Worms in the bodies of Cattell ſooner then *Savin* chopt ſmall, and beaten with ſweet *Butter*, and ſo given in round balls, to the beaſt; nor any thing maketh them void them ſo ſoon as ſweet *Wort* and a little black *Sope*, mixt together, and given the beaſt to drink.

CHAP. XXX.

Of the vomiting of Bloud.

THis diſeaſe commeth of the rankneſſe of bloud got in fruitfull Paſtures after hard keeping, inſomuch that you ſhall ſee the bloud flow from their mouths. The cure is, firſt to let the Beaſt bloud, and then give to drink *Bolearmoniack* and *Ale* mixt together. The Cure.

CHAP. XXXI.

Of the Gout in Cattell.

IF your Beaſt be troubled with the Gout, which you ſhall know by the ſudden ſwelling of his joynes, and falling again, you ſhall take *Gallingall*, and boyl it in the dregs of *Ale* and ſweet *Butter*, and Pultis-wiſe lay it to the offended member.

CHAP. XXXII.

Of Milting of a Beaſt.

MIlting is when a Beaſt will oft fall, and oft riſe, as he is at his labour, and cannot indure to ſtand any while together: it proceeds from ſome ſtroke or bruiſe, either by cudgill or other blunt weapon: And the cure is, not to raiſe him ſuddenly, but to give him *Ale*, and ſome ſtone *Pitch* mixt very well together to drink.

CHAP. *XXXIII.*

Of provoking a Beast to pisse.

IF your Beast cannot pisse, steep *Smalage*, or the roots of *Raddish* in a quart of *Ale*, and give it him to drink, and it presently helpeth.

CHAP. *XXXIV.*

Of the over-flowing of the Gall in Beasts.

THe over-flowing of the Gall, is ever known by the yellowneſſe of the skin, and the eyes of the beast: And the cure is, to give him a quart of Milk, Saffron, and Turmerick mixt together, to drink after he hath been let bloud, and ſo do three mornings together.

CHAP. *XXXV.*

Of a Beast that is goarded, either with a ſtake, or the horn of another Beast.

TAke *Turpentine* and *Oyl*, and heat them on the Coals, and then taint the wound therewith, and it will heal it.

CHAP. *XXXVI.*

Of a Cow that is whethered.

THis diſeaſe is, when a Cow after her calving cannot caſt her cleaning, and therefore to compell her to caſt it, you ſhall take the juyce of *Betteny*, *Mugwort*, and *Mallowes*, of each three ſpoonfuls, and mix it with a quart of Ale, and give it the Beaſt to drink: and alſo give her to eat ſcorched Barley, and it will force her to avoid her burthen ſuddenly.

CHAP. *XXXVII.*

Of drawing out ſtubs, or Thorns.

TAke black Snails and black Sope, and beat them to a ſalve, and apply them to the ſore, and it will draw the grief to be apparent.

CHAP. *XXXVIII.*

Of purging of Cattell.

THere is nothing doth purge a Beaſt ſo naturally, as the green weedy graſſe which groweth in Orchards under trees, not any Medecine doth purge them better that *Tar*, *Butter*, and *Sugar-Candy* mixt together, and given in balls as big as an Hens Egge.

CHAP.

CHAP. XXXIX.

Of being ſh ew-run, or ſhrew bitten.

A Shrew Mouſe, which is a Mouſe with ſhort uneven legs, and a long head like a Swines, is venemous, and if it bite a Beaſt, the ſore will ſwell and rankle, and put the Beaſt in danger; but if it onely run over a Beaſt; it feebleth his hinder parts, and maketh him unable to go: The cure then for being ſhrew bitten, is the ſame which is formerly ſhewed for the biting of other venemous Beaſts: But if he be ſhrew-run, you ſhall onely draw him under, or beat him with a bramble, which groweth at both ends in the Furrows of Corn-lands.

CHAP. XL.

Of faintneſſe in Labour.

IF your Beaſt in his labour, and heat of the day chance to faint; you ſhall looſe him, and drive him to the running ſtream to drink, and then give him two, or three Oſpines full of parch'd Barly to eat, and he will labour freſh again.

CHAP. XLI.

Of breeding Milk in a Cow.

IF your Cow after her Calving cannot let down her Milk; you ſhall give her a quart of ſtrong Poſſet-Ale, mixed with *Anniſeeds*, and *Coliander-ſeeds*, beaten to powder, to drink every morning, and it will not onely make her Milk ſpring, but alſo increaſe it wonderfully.

CHAP. XLII.

Of Bones out of joynt, or bones broken.

IF any Beaſt have a bone broken, or miſplaced, after you have ſet it right, and in his true place, you ſhall wrap a plaiſter about it, made of *Burgundy-pitch*, *Tallow*, and *Linſeed-oyl*, and then ſplent it, and let it remain unbound 15 dayes, and it will do much good.

CHAP. XLIII.

Of the Rot in Beaſts.

IF your Beaſt be ſubject to rottenneſſe, which you may know by his leanneſſe, miſlike, and continually ſcowring behind: you ſhall take *Bay-berries*, beaten to powder, Myrrhe, Ivy-leaves, Elder leaves, and Feather-few, a good lump of dry Clay, and Bay-ſalt, mix theſe together in ſtrong Urine, and being warm, give the

the Beast half a pint thereof to drink, and it will knit and preserve them.

CHAP. XLIV.

Of the Pantas.

THe Pantas is a very faint disease, and maketh a Beast to sweat, shake, and pant much. The cure is, to give him Ale & Urine, mixt together, a little soot and a little earning to drink two or three mornings before you labour him.

CHAP. XLV.

Of all manner of Wounds in Beasts.

TO cure any Wounds in beasts, given be edge-tools, or otherwise, where the skin is broke; take Hogs-grease, Tar, Turpentine, and Wax, of each a like quantity, and a quarter so much Verdigrease, and melt them altogether into one salve, and apply it to the wound, by spreading it upon a Cloath, and it will heal it without any rank or dead flesh.

The end of the Bull, Oxe, Cow, and Calfe, &c.

OF SHEEP.

CHAP. I.

Of Sheep in generall, their use, choise, shape, and preservation.

TO enter into any longer discourse of praise or profit of Sheep, or to shew my reading by relation of the Sheep of other Countreys, were frivolous; because I am to write much in a very little Paper, and I speak onely to my Countrey-men, the *English*, who desire to learn and know their own profit. Know then that

that whoſoever will ſtock himſelfe with good ſheep, muſt look into the nature of the ſoyle in which he liveth: For ſheep according to the earth and aire in which they live, do alter their nature and properties: The barren ſheep becomming good, in good ſoyles, and the good ſheep barren in evill ſoyles. If then you deſire to have ſheep of a curious fine ſtaple of Woole, from whence you may draw a thread as fine as ſilke, you ſhall ſee ſuch in *Herefordſhire*, about *Lempſter* ſide, and other ſpeciall parts of that Country; in that part of *Worceſterſhire* joyning upon *Shropſhire*, and many ſuch like places: yet theſe ſheep are very little of bone, black faced, and bear a very little burthen. The ſheep upon *Cotſall* hils are of better bone, ſhape, and burthen, but their ſtaple is courſer and deeper. The ſheep in that part of *Worceſterſhire*, which joyneth on *Warwickſhire*, and many parts of *Warwickſhire*, all *Leiceſterſhire*, *Buckinghamſhire*, and part of *Northamptonſhire*; and that part of *Nottinghamſhire* which is exempt from the Forreſt of *Sherwood*, beareth a large boned ſheep of the beſt ſhape, and deepeſt ſtaple; chiefly if they be paſture ſheep, yet is their wooll coorſer then that of *Cotſall*, *Lincolnſhire* eſpecially in the ſalt Marſhes, have the largeſt ſheep, but not the beſt Wool, for their legs and bellies are long and naked, and their ſtaple is coorſer then any other, the ſheep in *Yorkſhire*, and ſo Northward are of a reaſonable big bone, but of a ſtaple rough and hairy, and the welſh ſheep are of all the worſt, for they are both little, and of worſe ſtaple; and indeed are praiſed only in the diſh, for they are the ſweeteſt Mutton.

If now, knowing the natures and properties of the ſheep of every Countrey, you go about to ſtock your ground, be ſure to bring your ſheep from a worſer ſoile to a better, and not from a better to a worſe. The Lear, which is the earth on which a ſheep lyeth, and giveth him his colour, is much to be reſpected: the red Lear is held the beſt; the duskiſh, inclining to a little rednesſe is tolerable; but the white or dirty Lear is ſtark naught. In the choice therefore of your ſheep, chuſe the biggeſt boned, with the beſt wool; the ſtaple being ſoft, greaſie, well curled and cloſe together, ſo that a man ſhall have much adoe to part it with his fingers. Theſe ſheep beſides the bearing of the beſt burthen, are alwayes the beſt Butchers ware, and go ſooneſt away in the Mar-

Of the choice of ſheep.

Of the Lear.

the Beast half a pint thereof to drink, and it will knit and preserve them.

CHAP. XLIV.

Of the Pantas.

THe Pantas is a very faint disease, and maketh a Beast to swear, shake, and pant much. The cure is, to give him Ale & Urine, mixt together, a little soot and a little earning to drink two or three mornings before you labour him.

CHAP. XLV.

Of all manner of Wounds in Beasts.

TO cure any Wounds in beasts, given be edge-tools, or otherwise, where the skin is broke; take Hogs-grease, Tar, Turpentine, and Wax, of each a like quantity, and a quarter so much Verdigrease, and melt them altogether into one salve, and apply it to the wound, by spreading it upon a Cloath, and it will heal it without any rank or dead flesh.

The end of the Bull, Oxe, Cow, and Calfe, &c.

OF SHEEP.

CHAP. I.

Of Sheep in general, their use, choise, shape, and preservation.

TO enter into any longer discourse of praise or profit of Sheep, or to shew my reading by relation of the Sheep of other Countreys, were frivolous; because I am to write much in a very little Paper, and I speak onely to my Countrey-men, the *English*, who desire to learn and know their own profit. Know then that

that whoſoever will ſtock himſelfe with good ſheep, muſt look into the nature of the ſoyle in which he liveth: For ſheep according to the earth and aire in which they live, do alter their nature and properties: The barren ſheep becomming good, in good ſoyles, and the good ſheep barren in evill ſoyles. If then you deſire to have ſheep of a curious fine ſtaple of Woole, from whence you may draw a thread as fine as ſilke, you ſhall ſee ſuch in *Herefordſhire*, about *Lempſter* ſide, and other ſpeciall parts of that Country; in that part of *Worceſterſhire* joyning upon *Shropſhire*, and many ſuch like places: yet theſe ſheep are very little of bone, black faced, and beir a very little burthen. The ſheep upon *Cotſall* hils are of better bone, ſhape, and burthen, but their ſtaple is courſer and deeper. The ſheep in that part of *Worceſterſhire*, which joyneth on *Warwickſhire*, and many parts of *Warwickſhire*, all *Leiceſterſhire*, *Buckinghamſhire*, and part of *Northamptonſhire*; and that part of *Nottinghamſhire* which is exempt from the Forreſt of *Sherwood*, beareth a large boned ſheep of the beſt ſhape, and deepeſt ſtaple; chiefly if they be paſture ſheep, yet is their wooll coorſer then that of *Cotſall*, *Lincolnſhire* eſpecially in the ſalt Marſhes, have the largeſt ſheep, but not the beſt Wool, for their legs and bellies are long and naked, and their ſtaple is coorſer then any other, the ſheep in *Yorkſhire*, and ſo Northward are of a reaſonable big bone, but of a ſtaple rough and hairy, and the welſh ſheep are of all the worſt, for they are both little, and of worſe ſtaple; and indeed are praiſed only in the diſh, for they are the ſweeteſt Mutton.

Of the choice of ſheep.

If now, knowing the natures and properties of the ſheep of every Countrey, you go about to ſtock your ground, be ſure to bring your ſheep from a worſer ſoile to a better, and not from a better to a worſe. The Lear, which is the earth on which a ſheep lyeth, and giveth him his colour, is much to be reſpected: the red Lear is held the beſt; the duskiſh, inclining to a little rednesſe is tolerable; but the white or dirty Lear is ſtark naught. In the choice therefore of your ſheep, chuſe the biggeſt boned, with the beſt wool; the ſtaple being ſoft, greaſie, well curled and cloſe together, ſo that a man ſhall have much adoe to part it with his fingers. Theſe ſheep beſides the bearing of the beſt burthen, are alwayes the beſt Butchers ware, and go ſooneſt away in the Mar-

Of the Lear.

ket. Therefore, in the choice of ſheep for your breed, have a principall reſpect to your Rams, for they ever mar or make a flock: let them as neer as you can, have theſe properties or ſhapes. Firſt, large of body in every generall part, with a long body, and a large belly, his fore-head would be broad, round, and well riſing, a cheerfull large eye, ſtrait ſhort noſtrils, and a very ſmall muzzel; by no means any horns, for the dodder ſheep is the beſt breeder, and his iſſue never dangereth the Dam in yeaning, as the horned ſheep do: beſides, thoſe ſheep which have no horns, are of ſuch ſtrength of head, that they have oft been ſeen to kill thoſe ſheep which have the largeſt horns, and beſt wrinkled: A ſheep would have a large upright neck, ſomewhat bending like the neck of a horſe, a very broad back round buttocks, a thick tayle, and ſhort joynted legs ſmall, clean and nimble, his wool would be thick and deep, covering his belly all over; alſo his face, and even to his noſtrils, and ſo downward to his very knees and hinder houghs. And thus according to the ſhape, properties and ſoil from whence you chuſe your Rams, chuſe the reſt of the flock alſo.

The ſhape of a ſheep.

The beſt time for your Ewes to bring forth their young ones is, if they be paſture ſheep, about the latter end of *April*, and ſo untill the beginning of *June*; but if they be field-ſheep, then from the beginning of *January* till the end of *March*, that their Lambs may be ſtrong and able before *May* day, to follow their Dams over the rough Fallow-lands, and Water-furrowes, which weak Lambs are not able to doe: and although you yean thus early in the Winter, when there is no graſſe ſpringing, and the ſharpneſſe of the weather alſo be dangerous, yet the husbandman muſt provide ſhelter and ſweet fodder, and the ſhepherd with great vigilance be ſtirred at all hours, to prevent evils, for the reaſons before ſhewed, and though the Ewe at the firſt be ſcant of Milk, yet as the warm weather increaſeth, and the graſſe beginneth to ſpring, ſo will her milk ſpring alſo.

When Ewes ſhould bring forth.

Now for your Lambs: about *Michaelmas* you ſhall ſeparate the male from the female; and having choſen out the worthieſt, which you mean to keep for Rams, put them aſide, and then gueld the reſt, which every orderly Shepherd can do ſufficiently, for there is no danger in guelding young Lambs. The firſt year a male Lamb is called a weather hog, and a female Lamb

Ordering Lambs.

an

an Ewe hog: the ſecond year the male is a Weather, and the female a Theaſe, and then ſhe may be put to the Ramme: but if you let her go over that year alſo, then ſhe is a double Theaſe, and will both her ſelfe be the goodlier ſheep, and alſo bring forth the goodlier Lambe; whence it comes, that the beſt ſheep-maſters, make more account of the double Theaſe, then of any other breeder.

You ſhall obſerve never to ſhear your Lambs till they be full hogs: you ſhall ever waſh three dayes before you ſhear: the beſt time of ſhearing is from *June* to *Auguſt*. Ewes are ever good breeders, from three years old till their mouths break. If you would have your Ewes bring forth male Lambs, note when the North wind bloweth, and driving your flock againſt the wind, let your Rammes ride as they go, and this will make the Ewes to conceive male lambs: ſo likewiſe, if you would have female lambs, put your Rams to the Ewes when the wind bloweth out of the South. Needfull Obſervations.

Now for the general preſervation of ſheep, feed them as much as you can upon high grounds, which are dry and fruitfull, the graſſe ſweet, yet ſo ſhort that it muſt be got with much labour but if you muſt force-perforce feed upon low and moyſt grounds which are infectious; you ſhall not bring your ſheep from the fold (for I now ſpeak to the honeſt Engliſh husbandman) untill the Sun be riſen, and that the beams begin to draw the dew from the earth, then having let them forth, drive them to their place of feed, and there with your dog chaſe them up and down till they be weary, and then let them either feed or take their reſt, which they pleaſe. This chaſing firſt, beateth away mill dews; and all other dews from the earth, as alſo thoſe webs, kels, and flakes which lying on the earth, and a ſheep licking them up, do breed rottenneſſe: Alſo this chaſing ſtirreth up that natural heat in a ſheep, which drinketh up, and waſteth the abundance of moyſture, which elſe would turn to rottenneſſe. Beſides, a ſheep being thus chaſed and wearied, will fall to his food more deliberately, and not with ſuch greedineſſe, as otherwiſe he would, and alſo make choice of that meat which is beſt for his health. If a Shepherd once in a month, or alwayes when he hath occaſion to handle his ſheep, rub their mouths with Bay-ſalt, it

is an excellent preſervation againſt all manner of ſickneſſe, and very comfortable for a ſheep alſo, for a ſheep will very well live, and abate of his fleſh by rubbing his mouth once a day with Bay-ſalt, only. Now, forasmuch as notwithſtanding theſe principles, a ſheep falleth into many infirmities; hereafter followeth the ſeverall cures of all manner of diſeaſes.

CHAP. II.

The ſigns to know a ſound ſheep, and an unſound ſheep.

IF a ſheep be ſound and perfect his eye will be bright and cheerful, the white pure without ſpot, and the ſtrings red, his gums alſo will be red, his teeth white and even, his skin on his briſket will be red, and ſo will each ſide betwixt his body and his ſhoulder where wool grows not, his skin in generall will be looſe, his wool faſt, his breath long, and his feet not hot: but if he be unſound, then theſe ſigns will have contrary faces; his eyes will be heavy pale, and ſpotted, his breaſt and gums white, his teeth yellow and foul, his wool when it is pulled will eaſily part from his body; and when he is dead open him, and you ſhall find his belly full of water, his fat yellow, his liver putrified, and his fleſh moyſt and watriſh.

CHAP. III.

Of ſickneſſe in generall, or the Feaver amongſt ſheep.

CHange of paſture is a great cure for ſick ſheep; yet if you find any more particularly troubled then the reſt, take *Paliol-Royall*, and ſtamping it, mix the juyce with water and vinegar the quantity of halfe a pint, and give it the ſheep with a horn, luke-warm; and by no means let the ſheep be much chafed: Alſo in theſe ſickneſſes the ſhepherd muſt have a great care to note from whence the diſeaſe groweth: if it proceed from cold, then to drive his ſheep to ſhelter; if from heat, then to feed them in ſhady and cool places.

CHAP. IV.

Of the generall Scab or Itch in ſheep.

THis generall Scab or Itch in ſheep, is of all diſeaſes the moſt common among them; proceeding from rainy and wet weather, which falling upon their skins, if they happen to be chaft or heated after, they preſently break forth into the ſcabs, which you ſhall know by a white filthy ſcurfe ſticking upon their

their skins: and the moſt uſuall medicine for the ſame, which all ſhepherds uſe, is to annoint the place with Tar, and Greaſe, mixt together; but if upon the firſt appearance of the Itch, you ſteep *Puliol-royall* in water, and waſh the skin therewith, it will preſerve them from running into the ſcab.

CHAP. V.

Of killing Maggots in Sheep.

IF a ſheep be troubled with Maggots you ſhall take *Gooſe greaſe*, *Tarre*, and *Brimſtone*, and mix them together on the fire; and then annoint the place therewith, and it will kill the Maggots.

CHAP. VI.

Of the red Water.

THe red Water is a poiſonous diſeaſe in ſheep, offending the heart, and is indeed as the peſtilence amongſt other cattel, therefore when you find any of your ſheep infected therewith, you ſhall firſt let him blood in the foot between the clawes; and alſo under the tayle, and then lay to the ſore places *Rew* or *Wormwood* beaten with Bay-ſalt, and it helpeth.

CHAP. VII.

Of Lung-ſicke, or any cough or cold.

IF your ſheep be troubled with any ſickneſs in his Lungs, which you ſhall know by his coughing and ſhortneſs of breath, you ſhall take *Fuſſilago* or *Coltsfoot* and *Lungwort*, and ſtamping them, ſtrain the juyce into a little hony and water, and give it the ſheep to drink.

CHAP. VIII.

Of the Worm in the Claw of the Sheep, or any other part.

THis worm breedeth commonly before, between the clawes of the foot: but whereſoever it breedeth it is known by the head, which is like a tuft of hair, and will ſtick forth in a bunch. The cure is to ſlit the foot, and draw out the worm without breaking it; and then annoint the place with Tar and Tallow mixt together, for Tar ſimply of it ſelfe will draw too much. The Cure.

CHAP. IX.

Of the Wildfire in Sheep.

THis diſeaſe which is called the Wildfire, is a very infectious ſickneſſe, and will indanger the whole flock, but howſoever incurable

incurable it is held, yet it is certain, that if you take *Chervile*, and ſtamping it with old *Ale*, make a ſalve thereof, and annoynt the ſore therewith, it will kill the fire, and ſet the ſheep ſafe: and though ſome, for this diſeaſe, bury the firſt infected Sheep alive, with his heels upward, before the ſheep coat dore, yet this medicine hath been ever more effectuall.

CHAP. X.

Of the diſeaſe of the Gall, as Choler, Launditſe, and ſuch like.

The Cure. THeſe diſeaſes are known by the yellowneſſe of the ſheeps skinne: and the cure is, to take *Plantain* and *Lettice*, and ſtamping them together, mix their juice with vinegar, and give halfe a pint to a ſheep, to drink.

CHAP. XI.

Of the tough fleam, or ſtopping in Sheep.

IF your ſheep be ſtopt in the head, breaſt, or weſſand, either with tough fleam, or other cold humours, which you ſhall know by the running of the noſtrils; then take the powder of *Puliol-royal*, and mixing it with clarified Hony, diſſolve it in warm water, the quantity of halfe a pint, and give it the Sheep to drink, and it will looſen the fleam.

CHAP. XII.

Of bones broken in ſheep, or bones out of joint.

IF your ſheep chance to break a legge, or have any other bone miſplaced, you ſhall after you have ſet it ſtraight and right again, firſt bathe it with oyle and wine, and then dipping a cloath in molten *Patchgreaſe*, roul it about, and ſpline it as occaſion ſhall ſerve, and ſo let it remain nine dayes, and dreſſe it again, and at the end of the next nine dayes, the ſheep will be able to go.

CHAP. XIII.

Of any ſickneſſe in Lambs.

IE your Lambe be ſick, you ſhall give it *Mares-milk*, or *Goats milke*, or the own dams milk and Water to drink, and keep it very warm.

CHAP.

CHAP. XIV.

Of the Sturdy, turning-evil, or more-found.

THeſe diſeaſes proceed from rankneſſe of blood, which offendeth the brain, and other inward parts. The cure then is to let the ſheep blood in the eye veins, temple veins, and through the noſtrils, then to rub the places with young Nettles bruiſed. The Cure.

CHAP. XV.

Of diſeaſes in the eyes, as the Haw, dimneſſe, or any ſoreneſſe.

IF your ſheep have any imperfection in his eyes, you ſhall drop the juyce of *Selandine* into them, and it is a preſent help.

CHAP. XVI.

Of water in a Sheeps belly.

IF a ſheep have water in his belly between the outward fleſh and the rim, then you may ſafely adventure to let it forth by making a little hole through the fleſh, and putting in a quill; but if it be between the rim and the bag, then it is incurable, for you may by no means cut the rim aſunder: When the water is let forth, you ſhall ſtitch up the hole, and annoint it with Tar and Butter mixed together: This water if it remain in the body, will rot the ſheep.

CHAP. XVII.

Of the Tag'd or Belt in ſheep.

A Sheep is ſaid to be Tag'd or Belt, when by a continuall ſquirt running out of his ordure, he berayeth his tayle, in ſuch wiſe, that through the heat of the dung it ſcaldeth, and breedeth the ſcab therein. The cure is, with a paire of ſheers to cut away the tags, and to lay the ſore bare and raw, and then to throw earth dryed upon it, and after that Tar and Gooſe-greaſe mixt together. The Cure.

CHAP.

CHAP. XVIII.

Of the Pox in Sheep.

THe Pox in ſheep are ſmall red pimples like purples riſing on the skin, and they are infectious. The cure is, to take Roſemary, and boyle the leaves in vinegar, and bath the ſores therewith, and it will heal them: change of paſture is good for this diſeaſe, and you ſhall alſo ſeparate the ſick from the ſound.

The Cure.

CHAP XIX.

Of the Wood-evill, or Cramp.

THis diſeaſe is weakneſs or ſtraitning of the ſinewes got by colds and ſurfeits: it is very mortall, and will run through a whole flock. The cure is, to take *Cinkfoile*, or *Five-leaved-graſs*, and boyl it in wine, and give the ſheep a pint thereof to drink, & keep him warm, and chafe his legs with oyl and vinegar.

The Cure.

CHAP. XX.

Of making an Ewe to love her own Lamb, or any other Ewe's Lamb.

IF an Ewe grow unnaturall, and will not take to her Lamb after ſhe hath yeaned it, you ſhall take a little of the clean of the Ewe, which is the bed in which the lamb lay, and force the Ewe to eat it, or at leaſt chew it in her mouth, and ſhe will fall to love it naturally: but if an Ewe have caſt her lamb, and you would have her take to another Ewes lamb, you ſhall take the lamb which is dead, and with it rub and daub the live lamb all over, and ſo put it to the Ewe; and ſhe will take as naturally to it, as if it were her own.

CHAP. XXI.

Of licking up poyſon.

IF a ſheep chance to lick up any poyſon, you ſhall perceive it by a ſudden ſwelling and reeling of the ſheep. And the cure is, as ſoon as you ſee it ſtagger, to open the mouth, and you ſhall find one or more bliſters upon the tongue roots, you ſhall preſently break them with your fingers, and rub them with earth or ſage, and then piſs into the ſheeps mouth, and it will do well.

The Cure.

CHAP.

CHAP. XXII.

Of Lambs yeaned ſicke.

IF a Lamb be yeaned ſick and weak, the Shepheard ſhall fold it up in his cloake, blow into the mouth of it, and then drawing the dams dugs, ſquirt milk into the mouth of it.

CHAP. XXIII.

Of making an Ewe to be eaſily delivered.

IF an Ewe can hardly bring forth or yean her Lamb, you ſhall take *Balſamint* or *Horſe mint*, and put either the juyce or powder of it into a little ſtrong ale, and give it the Ewe to drink, and ſhe wil yean preſently.

CHAP. XXIV.

Of teeth looſe.

IF a Sheeps teeth be looſe, let him blood in his gums, and under his tayle, and then rub his teeth with Earth, Salt and Sage.

CHAP. XXV.

Of encreaſing Milk in Ewes.

NOthing encreaſeth Milke in Ewes more then change of paſture and feeding: driving them one while unto the hils, another while to the Valleys; and where the graſs is ſweeteſt and ſhort, and the ſheep eateth with beſt appetite, there ſee you continue longeſt: for touching, giving them *Fitches*, *Dill*, *Anniſeeds*, and ſuch like, this change of ground will make Milk ſpring much better.

CHAP. XXVI.

Of the ſtaggers, or leaf ſickneſſe in Lambs, or elder Sheep.

THe Staggers is ingendred in ſheep by ſurfeiting on Oake-leaves, hawthorn leaves, or ſuch like, which Lambs are very apt unto: it is a cold corrupt blood, or fleam, gathered together about the brain: indeed it is ſuddenly mortal. The beſt cure is, to take *Aſafetida*, diſſolved in warm water, & put the quantity of half a ſpoonfull into each ear of the ſheep or Lamb, and it is a preſent remedy. The Cure.

CHAP. XXVII.

Of Worms in the guts of Sheep or Lambs.

Sheep are as ſubject to wormes in their guts or ſtomachs as any other cattel whatſoever, which you ſhall know by beating

ting their bellies with their feet, and by looking continually a their bellies. The cure is, to take the leaves of *Coliander*, and to ſtamp them, and then mixing the juyce thereof with hony, to give the ſheep to drink; and then chaſe him a little, and keep him two or three houre faſting.

The Cure.

Chap. XXVIII.

Of the loſſe of the Crudde.

That which helpeth the loſſe of the Cudde, in Oxe or Cow the ſame is a preſent remedy for ſheep, and is ſpoke of before in a former chapter.

Chap. XXIX.

Of ſaving ſheep from the Rot.

This diſeaſe of Rottenneſſe is the cruelleſt of all other amongſt Sheep, and extendeth his violence over all the flock: Nay, over Town-ſhips and countryes; and though it be held of moſt men incurable, yet good Government, and this Receit I ſhall deliver you, will not only prevent it, but preſerve your ſheep ſafe: Therefore, as ſoon as you perceive that any of your ſheep are tainted, you ſhall take *Adraces*; which is a certain ſalt, gathered from the ſalt Marches, in the heat of Summer, when the tide is going away, and leaving certain drops of ſalt water on the Graſſe, then the violent heat of the Sun turns it to ſalt; and to ſpeak briefly, all ſalt made by the violence of the Suns heat only, is taken for *Adraces*, of which there is infinite ſtore in Spain. With this *Adraces* rub the mouths of all your ſheep once a week, and you ſhall never need to fear the rotting of them, for it hath been well tryed, and as I imagine, the experiment is found out from this very ground. It is a rule and well known at this day in *Lincolnſhire*, and in *Kent*, that upon the ſalt Marſhes, ſheep did never dye of the rot: no other reaſon being known therefore; but the licking up of that ſalt, and without doubt, it is moſt infallible and moſt eaſie.

Chap. XXX.

A few precepts for the Shepheard.

It is meet that every good and carefull Shepheard know what food is good for ſheep, what hurtfull: that following the one and eſchewing the other, he may ever keep his cattel in good health.

health. The graſs that is moſt wholſome for ſheep, is that which hath growing in it good ſtore of *Melilot*, *Claver*, *Selfe-heal*, *Cinckqueſoyl*, *Broom*, *Pimpernel* and white *Henband*.

The graſs which is unwholſome for Sheep, is that which hath growing amongſt it, *Spare wort*, *Penny wort*, or *Penny graſſe*, and any weeds which grow from inundation or over-flows of water; likewiſe, *Knot-graſſe* is not good, nor mildewed graſſe. Of all Rots the hunger Rot is the worſt, for it both putrifieth the fleſh and skin, and this is moſt incident to field ſheep, for to paſture ſheep it never hapneth. The next Rot to it is the pelt rot, which commeth by great ſtore of Rain, immediately after a ſheep is new ſhorn, which, mildewing the skin, corrupteth the body; and this alſo is moſt incident to field ſheep, which want ſhelter.

There be little white Snails which a ſheep will lick up, and they will ſoon rot him.

There will grow upon Ewes teats little dry ſcabs, which will ſtop their milk, when the Lambs ſuck; the Shepheard muſt have a care to pull them away.

A ſheep will have a bladder of water under his chin ſometimes which the ſheepheard muſt be carefull to let out and lance, or the ſheep will not proſper.

It is not good to ſheare ſheep before Midſummer, for the more hee ſweateth in his Wool, the better and more kindly it is.

If you will know the age of your Sheep, look in his mouth; and when he is one ſhear, he will have two broad teeth afore: When hee is two ſhear, he will have four broad teeth afore: when he is three, he will have ſix; and when he is four ſhear, he will have eight: and after thoſe yeares his mouth will begin to break: For touching that Rule of the eevenneſſe and uneveneſs of the mouth, it is uncertain, and faileth upon many occaſions.

The end of the Sheep.

Of Goates.

CHAP. I.

Of Goats a d of their Natures.

SEeing Goates are not of any generall uſe in our Kingdome, but only nouriſhed in ſo me wild and barren places, where cattle of better profit can hardly be maintained, as in the mountainous parts of *Wales*, in the barrenneſt parts of *Cornwall* and *Devonſhire*, on *Malborn* hils, and ſome few about the *Peake*; I will not ſtand upon any large diſcourſe, but as briefly as I can, give you the natures and cures. You ſhall then know, that the Goat is a beaſt of a hot, ſtrong, and luſty conſtitution; eſpecially in the act of generation; that they exceed all other cattle; delight to live in mountains that be high craggy, and full of buſhes, bryars, and other wood, they will feed in any plain paſtures, but their ſpecial delight is in brouſing upon Trees, they are ſo nimble of foot that they will go in places of greateſt danger. The profit which comes from them is their milk, which is an excellent reſtorative, and their Kids which are an excellent Veniſon. They are in other couutryes, as in *Spain*, the Ilands of the *Azores*, and the Ilands of the *Canaries*, preſerved for the chaſe and for hunting as we preſerve our Dear both Red and Fallow, and make excellent paſtime.

The Nature of Goats.

His ſhape.

For the ſhape of the Goat: he would have a large body, and well hayred, great legs, upright joynts, not bending, a neck plain and ſhort, a head ſmall and ſlender, large horns, and bending, a big eye, and a long beard, and his colour white, black, or pide. Some do uſe to ſhear them, to make rough mantles of: but it is not ſo with us in *England*. The ſhe Goat would have large teate and big udder, hanging ears, and no horns, as they have in many places.

The ordering of Goates.

Theſe Goats would be kept in ſmall flocks, or herds, as not above

above a hundred in a heard: As they muſt in the heat of Summer have much ſhade, ſo in the Winter likewiſe much ſhelter: for they can neither endure extremity of heat nor cold, eſpecially, the violence of winter, for that will make the ſhe Coat caſt her Kidde, or bring it forth untimely. Theſe love Maſt well, but yet you muſt give them other food to mixe with it. The beſt time to let the Male and Female go together, is about the beginning of December. If you houſe your Goats; in the winter, let them have no litter to lye on, but the floor paved, or gravelled, for otherwiſe their own heat will annoy them: they muſt alſo be kept very cleanly, for they can indure no filthy ſavours. For the young Kids, you ſhall in all parts order them as you do your Lambs.

Now for their preſervation, if they be ſuffered to go and chuſe their own food, they are to themſelves ſo good Phyſitians, that they will ſeldome or never be troubled with any inward ſickneſſe; only the unnaturall exceſſe of their luſt maketh them grow ſoon old, and ſo both paſt uſe and profit. For thoſe particular diſeaſes which accidentally fall upon them: here followeth the cures.

Chap. II.

Of the Peſtilence in Goats, or any inward and hidden ſickneſſe.

IF you perceive your Goats to droop, or look with ſullen or ſad countenances, it is an aſſured ſign of ſickneſſe, but if they foam or lather at the mouth, then it is a ſign of the Peſtilence. The cure is, firſt, to ſeparate them from the ſound, then to let them bloud, and give them the buds and leaves of *Celadine*, with ruſhes and reeds to eat, and it is a preſent remedy. The Cure.

Chap. III.

Of the Dropſie in Goats.

GOats are very much ſubject unto the Dropſie, through their exceſſe of drinking water, the ſign whereof is a great inflammation and heat in the skin: the cure is, to ſeeth Wormwood in Water and Salt; and give a pint thereof to the Goat to drink divers mornings, for to ſlit and let out the water under the ſhoulder, is not ſo certain and ſafe a cure. The Cure.

CHAP.

Chap. IV.

Of ſtopping the Teats.

THere will ingender in the teats of Goats, a certain tough hard fleam, which will ſtop the milk from iſſuing : which to cure, you ſhall with your finger and your thumb pull it away and then annoynt the place with hony, and the Goats milk mixt together.

The Cure.

Chap. V.

Of Goats that cannot Kidde.

GOats above all other cattle, are troubled with hardneſſe in Kidding, by reaſon that if they be chaſed or hunted their Kidds will turn in their bellies : the remedy then to preſerve them from that danger, is to keep them quiet and untroubled, untill they have Kidded.

Chap. VI.

Of the Tetter, or dry Scab in Goats.

TO heal any Tetter, or dry ſcab in Goats, take *Black ſoape*, *Tarre*, *Hogs-greaſe*, and *Brimſtone*, mixe them well together and annoynt the ſores therewith, and it will heal them.

Chap. VII.

Of Gelding Kiddes in the Summer ſeaſon.

KIds being gelt in the Summer ſeaſon, as thoſe which are late kidded muſt neceſſarily be : the flye will be ſo buſie with the ſore, that with their blowings they will breed ſuch ſtore of Maggots in the wound, that it will indanger their lives : to defend them then from ſuch annoyance of the flye, you ſhall take Soot, Tar, and thick Cream, and mixe them well together, and annoynt the wound therewith, and it will both heal it and keep the flye away.

Chap. VIII.

Of the Itch in Goats.

IF your Goats be troubled with any itch, ſo that they cannot feed for clawing or biting themſelves, you ſhall waſh their skins with old Chamber-lye, and green Coporas well boyled together, and it will kill the Itch.

Chap.

Chap. IX.

Of the Tuel ſtopping in Goats.

Goates, when they are ſucking on their damms, or when they are new Kidded, will commonly have a great laxe or ſquirt, ſo that the ordure which commeth from them, if it be not well cleanſed and taken from them, it will with their own naturall heat ſo bake and dry, that it will ſtop up their Tuels, ſo that they cannot dung, which if it be not holpen, the Kidde will dye. The cure is, to cleanſe the place, and open the Tuel, and then put into it an inch or thereabout of a ſmall Candles end dipt in honey, and then annoynt all the Tuel over with Capons-greaſe. The Cure.

Chap. X.

Of the Staggers, or reeling evill in Goats.

If your Goats be troubled with the Staggers or Reeling evill, which is a diſeaſe bred in them by the violent heat of the Sun, you ſhall take *Bay-ſalt* and *Verjuyce*, and mixe them together, and give the Goat half a pint thereof to drink: or elſe take *Houſe leek*, and *Dragons*, of each alike: ſo grounds of *Ale* with a little new *Milk*: ſtamp the hearbs, and then mingle them together, then put thereto a few *geves* groſſely beaten, and then boyl it again, then cool it, and give the ſick Goat three or four ſpoonfuls thereof to drink, and it will cure her. Now for any other infirmities which ſhall happen unto Goats, you may cure them with the ſame medicines which you cure ſheep, for their natures do not much differ.

The end of the Goat.

Of Swine.

Chap. I.

Of all manner of Swine, their natures, uſe, ſhapes, and preſervations.

Although Swine are accounted troubleſome, noyſome, unruly, and greatly ravenous, as indeed their natures are not much differing from ſuch qualities; yet the utility and profit of them, will eaſily wipe off thoſe offences; for

for to ſpeak truly of the Swine, he is the Husbandmans beſt Scavenger, and the Huswives moſt wholſome ſink; for his food and living is by that which will elſe rot in the yard, make it beaſtly, and breed no good manure, or being caſt down the ordinary ſink in the houſe breeds noyſome ſmels, corruption, and infection; for from the Husbandman he taketh pulſe, chaff, barne duſt, mans ordure, garbage, and the weeds of his yard: and from the huswife her draffe, ſwellings, Whey, waſhing of tubs, and ſuch like, with which he will live and keep a good ſtate of body, very ſufficiently; and though he is accounted good in no place but the diſh only, yet there he is ſo lovely and ſo wholſome, that all other faults may be born with, he is by nature greedy, given much to root up grounds and tear down fences, he is very lecherous and in that act tedious and bruitiſh: he is ſubject to much anger, and the fight of the Boars are exceeding mortal: they can by no means indure ſtormes, winds, or foul weather, they are excellent obſervers of their own homes: and exceeding great lovers one of another: ſo that they will dye upon any beaſt that offendeth their fellows.

Of the choice and ſhape of Swine.

Now touching the choyce of Swine, you ſhall underſtand that no Country in England breedeth naturally better Swine one then another: but if any have preheminence, then I muſt prefer *Leiceſterſhire*, and ſome parts of *Northampton hire*, and clay countries bordering on *Leiceſterſhire*, and the reaſon I take to be, their great multiplicity of grain, eſpecially beans and pulſe. For the Maſt countreys, though they are good feeders they are no large breeders, whence it comes that your wild ſwine is ever your leaſt ſwine, but your ſweeteſt Bacon. But if the Race and keeping be alike, the proportion and goodneſſe will be alike; therefore in the choyce of your ſwine, chiefly the boars and ſows which you breed of, let them be long and large of body, deep ſided, and deep bellied, thick thighs, and ſhort leggs, for though the long-legged ſwine appear a goodly beaſt, yet he but couſeneth the eye and is not ſo profitable to the Butcher, high claws, thick neck, a ſhort and ſtrong groine, and a good thick chine well ſet with ſtrong briſtles: the colour is beſt which is all of one peece, as all white, or all ſanded; the pide are the worſt and moſt apt to take meazels; the black is tolerable, but our Kingdome through the coldneſs breedeth them ſeldome.

The

The uſe and profit of ſwine is onely (as the husbandman ſaith) for the roofe, which is bacon; for the ſpit, which is porke; ſowſe and pudding; and for breed, which is their pigs only. To have two many ſowes in a yard is not good; for their increaſe and bringing forth is ſo great, that they will for want of food eat one another: A ſow will bring forth pigs three times a yeer, namely at the end of every ten weeks, and the number are great which they will bring forth: for I have known one ſow have twenty pigs at one litter; twelve, fourteen, and ſixteen, are very common; yet a ſow can bring up no more pigs then ſhe hath teats, therefore look how many ſhe hath, and ſo many pigs preſerve of the beſt, the reſt caſt away or put to other ſowes which want, yet give ſuck. A ſow will bring pigs from one year old, till ſhe be ſeven years old: The pigs which you rear, after you have choſen the beſt for Boars or Sowes to breed on, geld the reſt both male and females: the males will make goodly hogs, which are excellent bacon or porke, and the females which are called ſplayd-guilts, will do the like; and breed a great deal more greaſe in their bodies, whence it comes, that the husbandman eſteems one ſplayd-guilt before two hogs. Young ſhots which are Swine of three quarters, or but one year old, are the daintieſt pork. The uſe and profit of ſwine

Now for the preſervation of Swine, it is contained in their government and food, and is all that belongeth to the office of the ſwineherd. The orderlieſt feeding of ſwine is, (when you keep them but in good ſtate of body, and not ſeek to fat them) in the morning early when you unſtie them, to give them draff, pulſe, or other garbage, with ſwilling in their troughes, and when they have eaten it, to drive them to the field, where they may graze and root for their food: and of grounds the ſoft mariſh and mooriſh grounds are the beſt, where they may get the roots of Seedge, Reeds, Ruſhes, Knot-graſſe, and ſuch like, which is wholeſome for ſwine, or the fallow or tith field, where they may root at pleaſure, and by killing the weeds bring profit to the earth, and at the fall of the leafe, it is good to drive them to hedges, where they may get Haws, Hips, Sloes, Crabs, or ſuch fruit, which is alſo very wholeſome: and the poore ſort will gather their fruits, and keep them ſafe to feed their Swine with all the

Winter. When evening commeth, you ſhall drive your Swine home, and then filling their troughs with draff and ſwillings, let them fill their bellies, and then ſtie them up, ſo ſhall you keep them from doing other harts and injuries. If once in a fortnight you mixe with your ſwillings ſome Radle or red Oaker, it will preſerve them wonderfully from meazels, and all inward infections: and thus much for the generall diſcourſe of Swine: now I will proceed to their particular infirmities, and other buſineſſes.

Chap. II.

Of the Feaver, or any hidden ſickneſſe in Swine.

THere is no beaſt maketh his ſickneſſe ſo apparent as the ſwine; for when he findeth any griefe or diſtemperature in his body, he preſently droopeth, forſakes his meat, and will not eat till he find in himſelfe a perfect recovery: therefore when you ſhall ſo find him to forſake his meat, you ſhall firſt let him blood under his tayle, and under his ears, and if they bleed not freſhly enough, you ſhall beat them with a ſmall ſtick, and that will bring forth the blood; then wrap about the wounds the bark of an young Oſier, and then keep him warm, and give him to drink warm ſwillings, well mixt with barly meal, and red oaker.

The Cure.

Chap. III.

Of the Murren, Peſtilence, or Cather in Swine.

THeſe diſeaſes being all of one nature, are very much incident in ſwine, and ſpring from many grounds as from corruption in blood, ingendred by the eating of rotten fruit, or too much Butchers garbage, and many times by eating too rank graſſe, wherein is much *Hemlock*: their particular ſigns are moyſt eyes, and their heads borne on each ſide, but their generel knowledge is their faſting and mortality: the cure is, to give them in warm walh, *Hens-dung*, and boyl'd *Liverwort*, with a little *Red Onker*.

The Cure.

Chap. IV.

Of the Gall in Swine.

SWine will have an over flowing of the Gall, becauſe choller is much powerful in them, which you ſhall know by a ſwel-

ling

ling which will riſe under their jawes, and the cure is, to ſtamp *Gallwort* or *Saffron*, and mix it with honey and water, and then ſtraining it, give it the Swine to drink by a pint at a time. The Cure.

Chap. V.

Of the Meazels in Swine.

THis diſeaſe of all other is moſt common in Swine, and with eaſe helped; as thus: you ſhall take the oldeſt Urine you can get, and mix it with red Oaker till it be thick, and about the quantity of an ale-quart, then mix it with a gallon of warm ſweet Whey, and give it the ſwine to drink, after he hath been kept all night faſting.

Chap. VI.

Of Impoſtumes in any part of a Swine.

SWine will have Impoſtumes in any part of their bodies, as under their throats, their ears, bellies, and oft upon their ſides. The cure is, if they be ſoft, to lance them, and let out the matter. and then heal them with Tarre and Butter, but if they be not ſoft, then let the Swine bloud under the tongue, and rub all his mouth, chaps and groin, with wheat-meal and ſalt, and the Impoſtume will go away.

Chap. VII.

Of Vomiting in Swine.

IF your Swine do vomit and caſt up his meat, you ſhall give him ſpelted Beans to eat, and they will ſtrengthen his ſtomack.

Chap. VIII.

Of leanneſſe, miſlike, ſcurfe and mangineſſe in Swine.

THeſe diſeaſes proceed from corruption of blood, ingendred by lying wet in their ſties, having filthy rotten litter, or much ſcarcity of meat. The cure is, firſt to let the Swine blood under the tail, then to take a Wool-card, and to comb off all the ſcurfe and filth from the Swines back, even till his skin bleed: then take *Tar*, *Hogs-greaſe* and *Brimſtone*, and mixing them well together, annoynt the Swine therewith, then let the ſtye be mended, his litter be ſweet, and give him good warm food, and the Swine will be fat and ſound very ſuddenly. The Cure.

CHAP. IX.

Of the ſleeping evill in Swine.

SWine are much ſubject to this diſeaſe in the ſummer time, and you ſhall know it by their continuall ſleeping, and neglecting to eat their meat: The cure is, to houſe them up, and keep them faſting twenty and four hours, then in the morning when hunger pincheth them, to give them to drink water, in which is ſtampt good ſtore of *Stonecrop*, which as ſoon as they have drunk, they will vomit and caſt, and that is a preſent remedy.

The Cure.

CHAP. X.

Of pain in the Milt.

SWine, are oft troubled with pain in their Milts, or Spleens, which proceedeth from the eating of Maſt, when they are firſt put thereunto, through their over greedy eating thereof, and is known by a Reeling, going of one ſide. The cure is, to give them the juyce of wormwood, in a little honied water, to drink, and it will aſſwage the pain.

The Cure.

CHAP. XI.

Of the unnaturalneſſe of Sows

MAny Sows do prove ſo unnatural, that they will devour their pigs when they have farro'd them; which ſpringeth from an unnatural greedineſſe in them, which to help, you muſt watch her when ſhe farroweth, and taketh away the pigs as they fall, then take the wreckling, or worſt pig, and annoint it all over with the juyce of *Stonecrop*, and ſo give it the Sow again: and if ſhe devour it, it will make her caſt and vomit ſo extreamly, that the pain of the ſurfeit will make her loath to do the like again: But of all cures, the beſt for ſuch an unnatural beaſt, is to feed her well, and then kill her.

CHAP. XII.

Of the Laxe or Flixe in hogs.

FOr the Laxe or Flixe in Swine, you ſhall give them Verjuyce and milk mixt together to drink, and then feed them with food, as ſpelted Beans, Acorns, or Acorn-huſks. This is alſo excellent, and approved for young pigs and Shots, when they have any ſcouring.

CHAP.

CHAP. XIII.

Of the lugging of Swine with dogs.

IF your ſwine be extreamly lugged and bitten with dogs, to prevent the rankling, and impoſtumation of the ſore, you ſhall annoint it with vinegar, ſope, and tallow mixt together, and it will cure the ſame.

CHAP. XIV.

Of the Pox in Swine.

THe Pox is a filthy and infectious diſeaſe in ſwine, proceeding from corrupt blood, ingendered by poverty, wet lying, lowſineſſe, and ſuch like, and the ſwine can never proſper which hath them. The cure is, to give him firſt to drink two ſpoonfuls of *London treacle*, in a pint of *honied water*, which will expell the infection outwardly, then to annoint the ſores with *Brimſtone* and *Boars-greaſe* mixt together, and ſo ſeparate the ſick from the ſound. The Cure.

CHAP. XV.

Of killing Maggots in the ears or other parts of Swine.

IF Maggots ſhall breed in the ears of your ſwine, which have been lugged with dogs for want of good looking unto, as often it hapneth: you ſhall take either the ſweeteſt wort you can get, or elſe honey, and annoynt the ſores therewith, and the Maggots preſently will fall off and die.

CHAP. XVI.

Of feeding Swine exceeding fat, either for Bacon, or for Lard.

DIvers men according to the nature of divers countries, have divers wayes in feeding of their ſwine, as thoſe which live near unto woods and places where ſtore of Maſt is, turn their ſwine unto the maſt for ſix or eight weeks, and then having got fleſh and fatneſſe on their backs do bring them home, and put them up in ſties; and then feed them for ten dayes or a fortnight after, with old dry peaſe, given them oft in the day a little at once, with water as much as they will drink: for this will harden the fleſh and fat, ſo that it will not conſume when it comes to boyling; this manner of feeding is good, and not to be diſliked. The feeding of ſwine in wood countries.

Novv

The feeding of ſwine in champian countries.

Now the feeding of Swine in champian Countryes, which are far from woods, is in this manner: Firſt, you ſhall ſtie up thoſe Swine which you intend to feed, and let them not come out of the ſame untill they be fed, but have their food and water brought unto them: Now the firſt two dayes you ſhall give them nothing; the third day you ſhall early in the morning give them a pretty quantity of dry peaſe or beans; at noon you ſhall give them as much more, at four of the clock as much more, and when you goe to bed as much more, but all that day no water. The next day you ſhall feed them again at the ſame hours, and ſet water by them, that they may drink at their own pleaſure, and twice or thrice a week as your proviſion will ſerve you, it is good to fill their bellies with ſweet whay, butter-milk, or warm waſh, but by no means ſcant the proportion of their peaſe; and by thus doing you ſhall feed a Swine fat enough for the ſlaughter in four or five weeks.

Of feeding at the reek.

There be other husbandmen in champian Countries, as in *Leiceſterſhire*, and ſuch like, that put their Swine to peaſe reeks, or ſtacks, ſet in the field near unto water furrowes or rundles, ſo that they may let the water into the ſtack yard, and then morning and evening cut a cutting of the ſtack or reek: and ſpread the reaps amongſt the Swine: this manner of feeding is beſt for ſmall porkets, and will fat them very reaſonable in three weeks or a month. If you feed ſheep amongſt your porks, it is very good, and dayly by many practiſed; for by that means you ſhall not loſe any of your grain; for what your ſheep cannot gather up, your porkets will.

Of feeding of ſwine in or about great Cities.

Now for ſuch as live in or near about great Cities or Towns, as London, York, or ſuch lik, and have neither great ſtore of Maſt, nor great ſtore of graine; yet they have a manner of feeding as good, and ſomewhat more ſpeedier then any of the other, only the bacon is not ſo ſweet or toothſome; and thus it is. They ſtie up their fatlings, as is before ſaid; and then take Chandlers graines, which is the dregs and offall of rendred Tallow, as hard skins, kels, and fleſhly lumps, which will not melt together with other coorſe skins of the tallow, ſuet, or Kitchin fee, and mixing it in warm maſh, give it the Swine to eat three or four times in the day, and it will ſuddenly puffe him

him up with fatneſſe, then beſtow of every ſwine a buſhel of dry peaſe to harden his fleſh, and you may kill them at your pleaſure. The only danger of this food is, it will at firſt ſometimes make ſwine ſcoure; eſpecially young pigs if they eat it: but as ſoon as you perceive ſuch a fault, give unto your elder ſwine milk and verjuyce, and to your ſucking pigs, verjuyce only.

Now laſtly, the beſt feeding of a ſwine for lard, or a Boar for brawn, is to feed them the firſt week with Barley ſodden till it break, and ſod in ſuch quantity that it may ever be given ſweet; then after to feed them with raw malt from the floor, before it be dryed, till they be fat enough: and then for a week after, to give them dry peaſe or beans to harden their fleſh. Let their drink be the waſhing of Hogſhead, and Ale-barrels, of ſweet Whay, and let them have ſtore thereof. This manner of feeding breeds the whiteſt, fatteſt, and beſt fleſh that may be, as hath been approved by the beſt husbands. Of feeding of Hogs for lard, or Boars for brawn.

The end of the Swine of all ſorts.

Of Conies.

Chap. I.

Of the tame rich Cony, his nature, choice, profit, and preſervation.

ALL ſorts of Conies may as well be kept tame as wild, and do above other beaſts delight in impriſonment and ſolitarineſſe, which proceedeth from the ſtrength of melancholy in their nature, being creatures ſo much participating of the earth, that their delight is to live in holes, rocks, and other dark Caverns. They are violently hot in the act of generation, and perform it with ſuch vigor and exceſſe, that they ſwoon and lye in trances a good The nature of the cony.

good ſpace after the deed is done. The males are given to much cruelty, and would kill the young rabbets if he could come to them: whence it proceedeth, that the females after they have kindled, hide their young ones, and cloſe up the holes, ſo that the buck-cony may not find them. The female or Doe conies are wonderfull in their increaſe, and brings forth young ones every month: therefore when you keep them tame in boxes, you muſt obſerve to watch them, and as ſoon as they have kindled, to put them to the buck, or otherwiſe they will mourn, and hardly bring up their young ones.

Of boxes for tame Conies. The boxes in which you ſhall keep your tame conies, would be made of thin wainſcot boards, ſome two foot ſquare, and one foot high; and that ſquare muſt be divided into two rooms, a greater room with open windowes of wire, through which the cony may feed; and a leſſer room without light, in which the cony may lodge and kindle, and before them both a trough in which you may put meat, and other neceſſaries for the cony, and thus you may make box upon box in divers ſtories, keeping your Bucks by themſelves, and your Does by themſelves, except it be ſuch Does as have not bred and then you may let a Buck lodge with them; alſo when your Doe hath kindled one neſt, and then kindleth another, you ſhall take the firſt from her and put them together in a ſeveral box, amongſt rabits of their own age provided that the box be not peſtred, but that they have eaſe and liberty.

Of the choice of rich conies. Now for the choice of theſe tame rich conies you ſhall not as in another cattel, look to their ſhape, but to their richneſſe, only elect your bucks, by the largeſt and goodlieſt conies you can get: and for the richneſſe of the skin: that is accounted the richeſt, which hath the equalleſt mixture of black and white haire together, yet the black rather ſhadowing the white, then white any thing at all over-maſtering the black, for a black skin with a few ſilver hairs is much richer then a white skin with a few black hairs: but as I ſaid before, to have them equally or indifferently mixt, is the beſt of all other: the fur would be thick, deep, ſmooth, and ſhining, and a black coat without ſilver hairs, though it be not reckoned a rich coat, yet it is to be preferred before a white, a pyed, a yellow, a dun, or gray.

Now

Now for the profit of these rich conies, (for unless they did far away and many degrees exceed the profit of all other conies they were not worthy the charge which must be bestowed upon them) it is this: First, every one of the rich conies which are killed in season as from *Martilmas* untill after *Candlemas*, is worth any five other conies, for they are of body much fatter and larger, and when another skin is worth two pence or three pence at the most, they are worth two shillings, or two shillings and sixpence: Again, they increase oftner, and bring forth more Rabbets at one kindling then any wild cony doth: they are ever ready at hand for the dish, winter and summer, without charge of Nets, Ferrets, or other Engines, and give their bodyes gratis, for their skins will ever pay their Masters charge with a most large interest.

Of the feeding and preservation of Conies.

Now for the feeding and preservation of these rich conies, it is nothing so costly or troublesome as many have imagined, and as some ignorant in the skil of keeping them, have made the world think: for the best food you can feed a cony with, is the sweetest, shortest, softest, and best hay you can get, of which one load will serve two hundred couples a year, and out of the stock of two hundred, you may spend in you house two hundred, and sell in the market two hundred more, yet maintain the stock good, and answer every ordinary casualty. This hay in little cloven sticks might with ease reach it and pull it out of the same, yet so as they may not scatter nor waste any. In the troughs under their boxes, you shall put sweet Oats and their water, and this should be their ordinary and constant food wherewith you shall feed your Conies, for all other should be used but Physically, as for the preservation of their health: as this you shall do twice or thrice in a fortnight for the cooling of their bodyes, give them Greens, as Mallows, Claver-grass, Sower-docks, blades of corn cabbage, or colwort leaves, and such like, all which cooleth and nourisheth exceedingly: some use to give them sometimes sweet grains, but that must be used seldome, for nothing sooner rotteth a Cony.

You must also have great care that when you cut any grass for them that are weeds, that there grow no young Hemlock amongst it, for though they will eat it with great greedinesse, yet it

is a preſent poyſon, and kills ſuddainly, you muſt alſo have an eſpecially care every day to make their boxes ſweet and clean, for the ſtrong ſavour of their ordure and piſs is ſo violent, that it will both annoy themſelves, and thoſe which ſhall be frequent amongſt them.

Of the Rot in Conies. Now for the infirmities which are incident unto them, they are but two: the firſt is rottenneſſe, which commeth by giving them too much green meat, or gathering their greens and giving it them with the dew on: therefore let them have it but ſeldome and then the dryneſſe of the Hay will ever drink up the moyſture, knit them and keep them ſound without danger.

Of madneſs in Conies. The next is a certain rage of madneſſe, ingendred by corrupt bloud, ſpringing from the rankneſſe of their keeping; and you ſhall know it by their wallowing and tumbling with their heels upward, and leaping in their boxes. The cure is, to give them *Harethiſtle* to eat, and it will heal them. And thus much of the tame rich cony, and his properties.

The end of the four footed Beaſts.

The Second Book.

Of Poultrey.

CHAP. I.

Containing the ordering, fatting, cramming, and curing of all infirmities of Poultry, as Cocks, Hens, Chickens, Capons, Geeſe, Turkies, Pheaſants, Partridges, Quails, Houſe-doves, and all ſorts of Fowl whatſoever. And firſt of the Dunghill Cock, Hen, Chickin, and Capon.

Some ſmall thing hath been written of this nature before, but ſo drawn from the opinions of old writers, as Italians, French, Dutch, and ſuch like, that it hath no coherence or congruity with the practice and experience of Engliſh cuſtoms, both their

their Rules and climes being ſo different from ours, that except we were to live in their countryes, the rules which are printed are uſeleſs, and to no purpoſe. To let paſs then the opinion of ſtrangers, and come to our own home bred knowledge which is ſo mixed with all profitable experiments, that it needeth not the help of other Nations ſo much, as men would make us believe.

Of the Choise and ſhape of the Cock.

You ſhall underſtand that the Dunghill cock (for the fighting cock deſerveth a much larger and particular diſcourſe) is a foul of all other birds the moſt manlyeſt, ſtately, and majeſticall, very tame and familiar with the man, and naturally inclined to live and proſper in habitable Houſes: he is hot and ſtrong in the act of generation, and will ſerve ten Hens ſufficiently; and ſome twelve and thirteen: he delighteth in open and liberall plains, where hee may lead forth his Henns into green paſtures and under hedges, where they may warm and bath themſelves in the Sun, for to be pend up in walled places, or in paved courts is moſt unnaturall unto them, neither will they proſper therein.

Now of the choyce and ſhape of the Dunghill cock, he would be of large and well ſized body, long from the head to the Rump, and thick in the garth; his neck would be long, looſe, and curiouſly bending it, and his body together, being ſtraight and high up erected, as the Falcon and other birds of prey are; his comb, wattles, and throat would be large, of great compaſs, ragged, and very Scarlet red, his eyes round and great, the colour anſwering the colour of his plume or male, as gray with gray, red with red, or yellow with yellow, his bill will be crooked, ſharp, and ſtrongly ſet on to his head, the colour being ſuitable with the colour of feathers on his head, his main or neck feathers would be very long, bright, and ſhining, covering from his head to his ſhoulders, his leggs ſtraight and of a ſtrong beam, with large long ſpurs, ſharp and a little bending, and the colour black, yellow, or browniſh, his claws ſhort, ſtrong, and well wrinkled, his tayl long, and covering his body very cloſely, and for the general colour of the Dunghil cock it would be red, for that is medicinal, and oft uſed in cullifes and reſtotatives. This cock ſhould be valiant within his own walk, and if he be a little

knavish, he is so much the better; he would be oft crowing, and busie in scratching the earth to find out wormes and other food for his Hens.

Of the Hen her choyce and shape.

Now for the Hen, if she be a good one, she should not differ much from the nature of the Cock, but be valiant vigilant, and laborious both for her self and her Chickens. In shape the biggest and largest are the best, every proportion answering those before described of the Cock, only instead of her comb she should have upon her crown a high thick tuft of feathers: to have many and strong claws is good, but to want hinder claws is better, for they oft break the egs, and such Hens sometimes prove unnatural, it is not good to chuse a crowing Hen, for they are neither good breeders nor good layers. If you chuse Hens to sit, chuse the elder, for they be constant, and will sit out their times, and if you will chuse Hens to lay, chuse the youngest, for they are lusty and prone to the act of ingendring, but for neither purpose chuse a fat Hen, for if you set her, she will forsake her nest, and if you keep her to lay, she will lay her egs without shels. Besides, a fat Hen, will waxe sloathfull, and neither delight in the one, nor in the other Act of Nature, such hens then are fittest for the dish then the hen-house.

Of Setting Hennes.

The best time to set Hens to have the best, largest, and most kindly Chickens, is in *February*, in the increase of the Moon, so that she may hatch or disclose her Chickens in the increase of the next new Moon; being in *March*, for one brood of *March* Chickens is worth three broods of any other: you may set Hens from *March* till *October*: and have good Chickens, but not after by any means, for the Winter is a great enemy to their breeding. A Hen doth sit twenty one dayes just, and then hatcheth, but Pea-hens, Turkies, Geese, Ducks, and other water-foul sit thirty: so that if you set your hen as you may doe upon any of their Eggs, you must set her upon them nine dayes before you set her upon her own. A Hen will cover nineteen Egges well, and that is the most in true rule, she should cover, but upon what number soever you set her, let it be odd, so the Egges will lye round, close, and in even proportion together: it is good when you lay your egs first under your Hens, to mark the upper side of them and then to watch the Hen, to see if she busie her self to turn them from the

one

one side to the other, which if you find she doth not, then when she riseth from her eggs to feed or bath her self, you must supply that office, and turn every egge it self, and esteem your Hen of so much the less reckoning for the use of breeding: be sure that the Eggs which you lay under her, be new and sound which you may know by their heavinesse, fulnesse, and cleernesse, if you hold them up betwixt the Sun and your eye-sight; you must by no means at any time raise your Hen from her nest, for that will make her utterly forsake it.

Choyce of Egges.

Now for helping a Hen to hatch her eggs, or doing that which should be her office, it is unnecessary, and shall be much better to be forborn then any way used; or to make doubt of bringing forth, or to think the Hen sitteth too long, as many curious Huswives do, if you be sure you set her upon sound Eggs, is as frivolous: but if you set her upon unsound Eggs, then blame your self both of the loss and injury done unto the Hen in her loss of labour.

A Hen will be a good sitter from the second year of her laying to the fifth, but hardly any longer; you shall observe ever when your Hen riseth from her nest, to have meat and water ready for her, lest straying too far to seek her food she let her eggs cool too much, which is very hurtfull. In her absence you shall stir up the straw of her nest, and make it soft and handsome, and lay the eggs in order, as she left them: do not in the election of your Eggs, chuse those which are monstrous great, for they many times have two yelks, and though some write, that such Eggs will bring out two Chickens, yet they are deceived; for if they bring forth two, they are commonly most abortive and monstrous: to perfume the nest with brimstone is good, but with Rosemary much better. To set hens in the Winter time in Stows or Ovens is of no use with us in England, and though they may by that means bring forth, yet will the Chickens be never good nor profitable, but like the planting of Lemons, and Pomegrance trees, the fruits will come a great deal short of the charges. When your Hen at any time is absent from her nest, you must have great care to see that the Cock come not to sit upon the Eggs, (as he will offer to do) for he will indanger to break them, and make her love her Nest worse.

Assoon

Of Chickens. As ſoon as your Chickens be hatch, if any be weaker then other, you ſhall lap them in Wool, and let them have the ayr of the fire, and it will ſtrengthen them: to perfume them with a little Roſemary is very wholſome alſo; and thus you may in a ſieve keep the firſt hatcht Chickens till the reſt be diſcloſed, (for Chickens would have no meat for two dayes) and ſome ſhels being harder than other, they will take ſo much diſtance of time in opening; yet unleſſe the Chickens be weak, or the Hen rude, it is not anviſe to let them alone under her, for ſhe will nouriſh them moſt kindly: after two dayes is paſt, the firſt meat you give them ſhould be very ſmall Oatmeal, ſome dry, and ſome ſteept in milk, or elſe fine wheat bread crums, and after they have got ſtrenth, then Curds; cheeſe-parings, white bread cruſt ſoak'd in Milk or Drink, Barly meal, or Wheat bread ſcalded, or any ſuch like ſoft meat that is ſmall, and will eaſily be divided. It is good to keep Chickens, one fortnight in the houſe, and after to ſuffer them to go abroad with the Hen to Worme, for that is very wholſome to chop green Chives amongſt your chickens meat will preſerve them from the Rye, and other diſeaſes in the head neither muſt you at any time let your chickens want water, for if they be forced to drink in puddle, it will breed the Pip: alſo, to feed upon Tares, Darnel, or Cockel, is very dangerous for young chickens.

Of feeding and cramming Chickens. You may by theſe foods aforeſaid, feed chickens very fat under their dams: but if you will have fat crammed chickens, you ſhall coop them up when the Dam forſaketh them, and the beſt crams for them is wheatmeal and milk, made into dough, and then the crams ſteeped in milk, and ſo thruſt down their throats: but in any caſe, let the crams be ſmall, and well wet for choaking, fourteen dayes will feed a chicken ſufficiently; and thus much briefly for your breed.

Of preſerving Egges. Now, becauſe egs of themſelves are a ſingular profit, you ſhall underſtand, that the beſt way to preſerve or keep them long, is, as ſome think, to lay them in good ſtraw, and cover them cloſe, but that is too cold, and beſides will make them muſty: others will lay them in bran, but that is too hot, and will make them putrifie; and others will lay them in ſalt, but that makes them waſte and diminiſh: the beſt way then to keep them moſt ſweet,

moſt

moſt ſound; and moſt full, is only to keep them in a heap of old Malt, cloſe and well covered all over.

You ſhall gather your egges up once a day, and leave in the neſt but the neſt egge, and no more; and that would ever be in the after noon; when you have ſeen every Hen come from her neſt ſeverally: ſome Hens will by their cackling tell you when they have laid, but ſome will lay mute; therefore you muſt let your own eye be your inſtructor. Of gathering Eggs.

Now to ching the Capon, which is the guelt Cock-chicken you ſhall underſtand; that the beſt time to carve or gueld, is as ſoon as the Dam hath left them, if the ſtones be come down, or elſe as ſoon as they begin to crow: for the art of carving it ſelf, it is both eaſie and common, and much ſooner to be learned by ſeeing one carved, then by any demonſtration in writing. Of the Capon when to carve him.

Theſe Capons are of two uſes: the one is to lead Chickens Ducklings, young Turkies, Pea-hens, Pheſants, and Partridges, which he will do altogether, both naturally and kindly, and through largeneſſe of his body, will brood or cover eaſily thirty or five and thirty; he will lead them forth ſo ſafely, and defend them againſt Kites or Buzzards, more and better then the Hens: therefore the way to make him to take unto them is, with a fine ſmal bryar, or elſe ſharp nettles at night, to beat and ſting all his breaſt and neather parts, and then in the dark to ſeat the chickens under him, whoſe warmth taketh away his ſmart; he will fall much in love with them, and whenſoever he proveth unkind, you muſt ſting, or beat him again, and this wil make him never forſake them. A Capon to lead Chickens.

The other uſe of Capons is, to feed for the diſh, as either at the Barn doors, with craps of corn, and the chavings of pulſe; or elſe in pens in the houſe, by cramming them, which is the moſt dainty: the beſt way then to cram a Capon (ſetting all ſtrange inventions apart) is to take Barley meal reaſonably ſifted, and mixing it with new milk, make it into a good ſtiff dough; then make it into long crams, biggeſt in the midſt, and ſmall at both ends, and then wetting them in luke warm milk, give the Capon a full gorge thereof three times a day, Morning, Noon, and Night, and he will in a fortnight or three weeks, be as fat as any man need to eat. Of feeding or cramming Capons.

As

As for mixing their crams with ſweet Wort, Hogs greaſe, or Sallet oyl, they are by experience found to breed loath in the Birds, and not to feed at all: only keep this obſervation, not to give your capon new meat until the firſt be put over. And if you find your capon ſomething hard of digeſtion; then you ſhall ſhal ſift your meal finer, for the finer your meal is, the ſooner it wil paſs through their bodyes. And thus much for the Capon Now for their infirmities, they follow in order.

CHAP. II.

Of the Pippe in Poultry.

THe Pippe is a white thin ſcale, growing on the tip of the tongue, and will make Poultry that they cannot feed: it is eaſie to be diſcerned, and proceedeth generally from drinking puddle water, from want of water, or from eating filthy meat. The cure is to pul off the ſcale with your nayle, and then rub the tongue with ſalt.

The Cure.

CHAP. III.

Of the Roup in Poultry.

THe Roup is a filthy byle or ſwelling on the Rump of Poultry, and will corſupt the whole body. It is ordinarily known by the ſtaring and turning backward of the feathers: The cure is, to pull away the feathers, and open the ſore, to thruſt out the core, and then waſh the place with ſalt and water, or with brine, and it helpeth.

The Cure.

CHAP. IV.

Of the Flux in Poultry.

THe Flux in poltry commeth with eating too much moyſt meat. The cure is, to give them peaſe bran ſcalded, and it wil ſtay them.

The Cure.

CHAP. V.

Of ſtopping in the belly.

STopping in the bellyes of poultry, is contrary to the flux. ſo that they cannot mute: therefore you ſhal annoynt their Vents, and then give them either ſmall bits of bread, or corne, ſteept in mans urine.

CHAP. VI.

Of Lice in Poultry.

IF your Poultry be much troubled with Lice, as it is a common infirmity

infirmity, proceeding from corrupt food or want of bathing in ſand, aſhes, or ſuch like: you ſhall take Pepper ſmall beaten, and mixing it with warm water, waſh your Poultry therein, and it will kill all ſorts of vermine.

CHAP. *VII.*

Of ſtinging with venemous Worms.

IF your Poultry be ſtung with any venemous thing, as you may perceive by their lowring, and ſwelling, you ſhall then annoint them with Rew and Butter, mixt together, and it helpeth.

CHAP. *VIII.*

Of ſore eyes in Poultry.

IF your Poultry have ſore eyes, you ſhall take a leaſe or two of ground-Ivy, and chawing it well in your mouth, ſuck out the juice, and ſpit into the ſore eye, and it will moſt aſſuredly heal it, as it hath been often tried.

CHAP. *IX.*

Of Hens that crow.

IF your Hens crow, which is an ill ſign and unnaturall, you ſhall pull their wings, and give her to eat either Barley ſcorched, or ſmall wheat, and keep her cloſe from other Poultry.

CHAP. *X.*

Of Hens that eats their Eggs.

IFf your Hen will eat her Eggs, you ſhall onely lay for her neſt-egge a piece of chalk cut like an egge, at which of pecking, and loſing her labour, ſhe will refrain the evil.

CHAP. *XI.*

Of keeping a Hen from ſitting.

IF you would not have your Hen ſit, you ſhall bathe her oft in cold water, and thruſt a ſmall feather through her noſtrills.

CHAP. *XII.*

Of making Hens lay ſoon and oft.

IF you feed your Hens often with toaſts taken out of Ale, with Barly boyld, or ſpelted fitches, they will lay ſoon, oft, and all the Winter.

CHAP. XIII.

Of making Hens lean.

BEcauſe fat Hens commonly either lay their egges without ſhels, or at the beſt hand lay very ſmall egges; to keep them lean and in good plight for laying, you ſhall mixe both their meat and water with the powder of tileſheards, chalk or elſe tears, twice or thrice a week.

CHAP. XIV.

Of the Crow-trodden.

IF your Hen be trodded with a carrion Crow, or Rook, as oft they are, it is mortall and incurable, and you ſhall know it by the ſtaring up of her feathers, and hanging of her wings, their is no way with her then, but preſently to kill her.

CHAP. XV.

Of the Hen-houſe, and the ſituation.

NOw for as much as no Poultry can be keep either in health or ſafety abroad, but muſt of force bee houſed, you ſhall underſtand that your Hen-houſe would be large and ſpacious, with ſomewhat a high roof, the walls ſtrong, both to keep out theeves and vermine, the windows upon the Sun-riſing, ſtrongly lathed, and cloſe ſhuts inward, round about the inſide of the walls; upon the ground would be built large pens of three foot high for Geeſe, Ducks, and great fowl to ſit in; neer to the eavings of the houſe would be long Pearches, reaching from one ſide of the houſe to the other, on which ſhould ſit your Cocks, Hens, Capons, and Turkies, each on ſeverall Pearches, as they are diſpoſed: at another ſide of the houſe, in that part which is darkeſt over the ground-pens, would be fixed hampers full of ſtraw for neſts, in which your Hens ſhall lay their egges, but when they ſit to bring forth chickens, then let them ſit on the ground, for otherwiſe it is dangerous: let there be pins ſtricken into the wall, ſo that your Poultry may clime to their Pearches with eaſe: let the floor by no means be paved, but of earth ſmooth and eaſie, let the ſmaller fowl have a hole at one end of the houſe, made to come in and out at, when they pleaſe, or elſe they will ſeek roust in other places; and for the greater Fowl the doore may be opened evening and morning. This houſe ſhould be placed either

either neer ſome Kitchin, Brew-houſe, or elſe ſome Kiln, where it may have air of the fire, and be perfumed with ſmoak, which to Pullen is delightfull and wholſome. And thus much of the Cock, Hen, Capon, and Chicken.

CHAP. XVI.

Of Geeſe, their nature, choice, and how to breed them.

GEeſe, are a Fowl of great profit many waies, as firſt for food, next for their feathers, and laſtly for their greaſe. They are held of Husbandmen to be fowl of two lives, becauſe they live both on land and water; and therefore all men muſt underſtand that except he have either Ponds or Stream, he can never keep Geeſe well. They are ſo watchfull and carefull over themſelves, that they will prevent moſt dangers: graſſe alſo they muſt neceſſarily have, and the worſt, and that which is the moſt uſeleſſe is the beſt, as that which is moriſh, rotten, and unſavory, for cattell. To good graſſe they are a great enemy, for their dung and treading will putrifie it, and make it them barren.

Now for the choice of Geeſe, the largeſt is the beſt, and the colour would be white or gray, all of one pair, for pide are not ſo profitable, and black are worſe: your Gander would be knaviſh and hardy, for hee will defend the Goſlings the better. The choice of Geeſe.

Now for the laying of Egges, a Gooſe beginning to lay in the Spring, and ſhe that layeth earlieſt, is ever the beſt Gooſe, for ſhe may have a ſecond hatch. Geeſe will lay twelve, and ſome ſixteen Eggs, ſome will lay more, but it is ſeldome, and they cannot be all well covered; you ſhall know when your Gooſe will lay, by her carrying ſtraw up and down in her mouth, and ſcattering it abroad: and you ſhall know when ſhee will ſit, by her continuing on the neſt till after ſhe hath layd. You muſt ſet a Gooſe upon her own Egs, for ſhe will hardly or unkindly ſit on another Gooſes Egs, as ſome imagine; but it is not ever certain: you ſhall in her ſtraw when you ſet her, mixe bottle roots, for it is good for the Goſlings: thirty dayes is the full time that a Gooſe ſitteth, but if the weather be fair and warme, ſhe will hatch three or four dayes ſooner; ever when the Gooſe riſeth from the Neſt, you Of laying Egs, and ſitting.

The ordering of Goslings.

shall give her meat, as skegge Oats, and Bran scalded, and give her leave to bathe in the water. After she hath hatcht her Goslings, you shall keep them in the house ten or twelve dayes, and feed them with Curds, scalded Chippings, or Barly meal in milk knodden and broken, also ground Malt is exceeding good, or any Bran that is scalded in water, milk, or tappings of drink. After they have got a little strength, you may let them go abroad with a Keeper five or six hours in a day, and let the dam at her leisure intice them in the water; then bring them in, and put them up, and thus order them, till they be able to defend themselves from vermine. After a Gosling is a month or six weeks old, you may put it up to feed for a green-Goose, and it will be perfectly fed in another month following: and to feed them, there is no meat better than skegge Oats boyl'd, and given plenty thereof thrice a day, Morning, Noon, and Night, with good store of milk, or milk and water mixt together to drink.

Of green-Geese, & their fatting.

Of Gander.

Now you shall understand one Gander will serve well five Geese, and to have not above forty Geese in a flock is best, for to have more is both hurtful and troublesome.

Fatting of elder Geese.

Now for the fatting of elder Geese, which are those which are five or six months old, you shall understand that after they have been in the stubble fields, and during the time of Harvest got into good flesh, you shall then chuse out such Geese as you would feed, and put them in several pens which are close and dark, and there feed them thrice a day with good store of Oats, or spelted Beans, and give them to drink water and Barley-meal mixt together, which must evermore stand before them, this will in three weeks feed a Goose so fat as is needful.

Of gathering Geese feathers.

Now lastly, for the gathering of a Gooses feathers, you shall understand, that however some Writers advise you for a needlesse profit to pull your Goose twice a year, March, and August: yet certainly it is very naught and ill; for first, by disabling the flight of the Goose, you make her subject to the cruelty of the Fox, and other ravenous beasts: and by uncloathing her in Winter you strike that cold into her body, which kills her very suddenly: therefore it is best to stay till moulting time, or till you kill her, and then you may imploy all her feathers at your pleasure, either for beds, Fletchers, or Scriveners.

For

For the diseases and infirmities in Geese, the most and worst they are subject unto, it is the *Gargil*, which is a mortall or deadly stopping of the head. And the ordinary and certain cure is, to take three or four cloves of Garlick, and beating them in a morter with sweet butter, make little long balls thereof, and give two or three of them to the Goose fasting, and then shut her up for two hours after. Of the Gargil in Geese. The Cure.

CHAP. XVII.

Of Turkies, their nature, use, increase and breeding.

TUrkies, howsoeuer by some Writers they are held devourers of Corn, strayers abroad, ever pulling for meat, and many such like fained troubles, as if they were utterly unprofitable, yet it's certain, they are most delicate, either in past, or from the spit, and being fat far exceeding any other house-fowl whatsoever: nay, they are kept with more ease and less cost, for they will take more pains for their food than any other Bird, onely they are enemies to a garden, and from thence must ever be kept. They when they are young are very tender to bring up, both because, they are of a straying nature in themselves, and the Dams are so negligent, that whilst she hath one following her, she never respecteth the rest: therefore they must have a vigilant keeper or attend them, till they can shift for themselves, and then they will flock together, and seldom be parted. Till you fat them, you need not take care for food for them; they love to roost in trees or other high places.

Now for your choice of such as you would breed on; your Turky Cock would not be above two years old at most, be sure that he be loving to the Chickens; and for your Hen, she will lay till she be five year old, and upward. Your Turky Cock would be a Bird large, stout, proud and majesticall; for when he walketh dejected, he is never good breeder. Of the choice of the Turky Cock.

The Turky Hen, if she be not prevented, will lay her egges in secret places, therefore you must watch her, and bring her to her Hen-house; and there compell her to lay. They begin to lay in March, and will sit in Aprill, and eleven Egs, or thirteen, is the most they should cover: they hatch ever between five and twenty and thirty dayes. When they have hatcht their broods, be sure Of the Turky Hen her sitting.

to

to keep the Chicks warme, for the least cold kills them, and feed them either with Curds, or green fresh Cheese cut in small pieces; let their drink be new milk, or milk and water: you must be careful to feed them oft; for the Turky-Hen will not like the House-Hen, call her chickens to feed them. When your Chicks have got strength, you shall feed them abroad in some close walled grass-plat, where they cannot stray, or else ever be at charge of a Keeper. The dew is most hurtful unto them, therefore you must house them at night, and let them abroad after Sun rise in the morning.

Of feeding Turkies.

Now for the fatting of Turkies, sodden Barly is excellent, or sodden Oats for the first fortnight, and then for another fortnight cram them in all sorts, as you cram your Capon, and they will be fat beyond measure. Now for their infirmities, when they are at liberty, they are so good Physitians for themselves, that they will never trouble their owners, but being coopt up; you must cure them as is before described for Pullen. Their Eggs are exceeding wholesome to eat, and restore nature decayed wonderfully.

CHAP. XVIII.

Of the Duck, and such Water Fowls.

THe tame Duck is an exceeding necessary fowl for the Husbandmans yard, for she asketh no charge in keeping, but liveth of corn lost or other things of lesse profit. She is once in a year a very great layer of Eggs; and when she sitteth she craves both attendance and feeding; for being restrained from seeking her food, she must be helped with a little barly or other over chaving of corn, such as else you would give unto Swine: as for her sitting, hatching, and feeding of her Ducklings it is in all poynts to be observed in such manner as you did before with the Goose, onely after they are abroad they will shift better for their food than Gaslings will. For the fatting of Ducks or Ducklings, you may do it in three weeks, by giving them any kind of Pulse or Grain, and good store of water.

Of Wild-Duck, and their ordering.

If you will preserve Wild-Ducks, you must wall in a little piece of ground, in which is some little pond or spring, and cover the top of it all over with a strong net: the pond must be set with many tufts of Oziers, and have many secret holes, and creeks

creek, for that will make them delight and feed thoug imprisoned. The wild-duck when she layeth, will steal from the Drake and hide her nest, for he else will suck the Eggs. When she hath hatcht she is most careful to nourish them, and needeth no attendance more than meat, which would be given fresh, twice a day, as scalded Bran, Oats or Fitches. The house-hen will hatch wild-Ducks eggs, and the meat will be much the better, yet every time they go into the water, they are in danger of the Kite, because the hen cannot guard them. In the same manner as you nourish wild-Ducks, so you may nourish Teils, Widgens, Sheldrakes or green Plovers.

CHAP. XIX.

Of Swans, and their feeding.

TO speak of the breeding of Swans is needlesse, because they can better order themselves in that businesser than any Man can direct them, onely where they build their nests, you shall suffer them to remain undisturbed, and it will be sufficient; but for the feeding them fat for the dish; you shall feed your Cygners in all sorts as you feed your Geese, and they will be through fat in seven or eight weeks, either croopt in the house, or else walking abroad in some private court; but if you would have them fat in shorter space, then you shall feed them in some pond, hedg'd or pal'd in for that purpose, having a little dry ground left, where they may sit and prune themselves, and you may place two troughs, one full of Barly and water, the other full of old dryed Malt, on which they may feed at their pleasure; and thus doing they will be fat in lesse than four weeks: for by this means a Swan keepeth himselfe neat and clean, who being a much defiled Bird, liveth in dry places so uncleanly, that they cannot prosper, unlesse his attender be diligent to dresse and trim his walk every hour.

CHAP. XX.

Of Peacocks, and Peahens, their increase, and ordering.

PEacocks, howsoever our old writers are pleased to deceive themselves in their praises, are birds more to delight the eye

by

by looking on them, than for a particular profit; the best commodity arising from them, being the cleaning and keeping of the yard free from venomous things, as Toads, Newts, and such like, which is their daily food: whence it comes, that their flesh is very unwholesome, and used in great banquets more for the rarenesse than the nourishment, for it is most certain, roast a Peacock or Peahen never so dry, then set it up, and look on it the next day, and it will be bloud raw, as if it had not been roasted at all.

The Peahen loves to lay her eggs abroad in bushes and hedges, where the Cock may not find them, for if he do, he will break them; therefore as soon as she begins to lay, separate her from the Cock and house her till she have brought forth her young, and that the cronet of feathers begin to rise at their foreheads, and then turn them abroad, and the Cock will love them, but not before. A Peahen sits just thirty dayes, and in her sitting, any grain, with water, is food good enough: before your Chickens go abroad, you shall feed them with fresh green Cheese, and Barly-meal, with water, but after they go abroad, the Dam will provide for them. The best time to set a Peahen is, at the beginning of the Moon, and if you set Hens eggs amongst her eggs, she will nourish both equally. The Pea-chickens are very tender, and the least cold doth kill them, therefore you must have care to keep them warm, and not to let them goe abroad but when the Sun shineth. Now for the feeding of them, it is a labour you may well save, for if they go in a place where there is any corn stirring, they will have part, and being meat which is seldom or never eaten, it mattereth not so much for their fatting.

CHAP. XXI.

Of the tame Pidgeon, or rough footed.

THe tame rough-footed Pidgeon differs not much from the wild Pidgeon, onely they are somewhat bigger, and more familiar, apt to be tame; they commonly bring not forth above one pair of Pidgeons at a time, and those which are the least of body are ever the best breeders, they must have their rooms and boxes made clean once a week, for they delight much in neatnesse

neſſe; and if the walls be outwardly whited or painted, they love it the better, for they delight much in fair buildings. They will bring forth their young ones once a moneth, if they be well fed, and after they be well pair'd they will never be divided. The Cock is a very loving and natural bird, both to his Hen and the young ones, and will ſit the Eggs while the Hen feedeth, as the Hen ſits whilſt he feedeth: he will alſo feed the young with as much painfulneſſe as the Dam doth, and is beſt pleaſed when he is brooding them. Theſe kind of Pidgeons you ſhall feed with white Peaſe, Tares, and good ſtore of clean water. In the room where they lodge you ſhall ever have a ſalt Cat for them to pick on, and that which is gathered from Salt-peter is the beſt: alſo they would have a good ſtore of dry Sand, Gravel, and Pybble, to bathe and cleanſe themſelves withall, and above all things great care taken, that no Vermine, or other Birds come into their boxes, eſpecially Sterlings, and ſuch like, which are great Egg-ſuckers. And thus much of the tame Pidgeon.

CHAP. XXII.

Of nouriſhing and fatting, Hearns, Puets, Guls, and Bitters.

HEarnes are nouriſhied for two cauſes: either for Princes ſports to make trains for the entring their Hawks, or elſe to furniſh on the Table at great Feaſts: the manner of bringing them up with the leaſt charge, is to take them out of their Neſts before they can flye, and put them into a large high Barn, where there is many high and croſſe beams for them to pearch on: then to have on the floor divers ſquare boards with rings in them, and between every board which would be two yards ſquare, to lace round ſhallow tubs full of water; then to the boards you ſhall tye great gobbers of Dogs fleſh, cut from the bones, according to the number which you feed: and be ſure to keep the houſe ſweet, and ſhift the water oft, only the houſe muſt be made ſo that it may rain in now and then, in which the Hearn will take much delight. But if you feed her for the diſh, then you ſhall feed them with Livers, and the intrails of Beaſts, and ſuch like, cut in great gobbets; and this manner of feeding will alſo feed either Gull, Puet, or Bitter: but the Bitter is ever beſt to be fed by the hand, becauſe when you have fed him, you muſt tie his beak together; or he will caſt up his meat again.

CHAP. XXIII.

Of feeding the Partridge, Pheſant, and Quaile.

THeſe three are the moſt daintieſt of all Birds, and for the Pheſant or Partridge, you may feed them both in one room where you may have little boxes where they may run and hide themſelves in divers corners of the room; then in the midſt you ſhall have three wheat ſheaves, two with their ears upward, and one with the ears downward, and near unto them ſhallow tubs with water, that the fowl may peck wheat out of the ears, and drink at their pleaſures, and by this manner of feeding, you ſhall have them as fat as is poſſible; as for your Quailes, the beſt feeding them is in long flat ſhallow boxes, each box able to hold two or three dozen, the foremoſt ſide being ſet with round pins ſo thick that the Quaile do no more but put out her head, then, before that open ſide, ſhall ſtand one through full of ſmall chilter-wheat, another with water, and thus in one fortnight, or three weeks you ſhall have them exceeding fat.

CHAP. XXIV.

Of Godwits, Knots, Gray-plover, or Curlews.

FOr to feed any of theſe Fowls which are eſteemed of all other the daintieſt and deareſt, fine Chilter-wheat, and water given them thrice a day, Morning, Noon, and Night, will do it very effectually; but if you intend to have them extraordinary and crammed fowl, then you ſhall take the fineſt dreſt wheat-meal, and mixing it with Milk, make it into paſte, and ever as you kneed it, ſprinkle into it the grains of ſmall Chilter wheat, till the paſte be fully mixt therewith; then make little ſmall crams thereof, and dipping them in water give to every fowl according to his bigneſſe, and that his gorge be well filled: do thus as oft as you ſhall find their gorges empty, and in one fortnight they will be fed beyond meaſure, and with theſe crams you may feed any fowl of what kind or nature ſoever.

CHAP. XXV.

Of feeding Black-birds, Thruſhes, Felfares, or any ſmall Birds whatſoever.

TO feed theſe Birds, being taken old and wild, it is good to have ſome of their kinds tame to mix among them, and then putting

ting them into great cages of three or four yeards ſquare, to have divers troughs placed therein, ſome filled with Haws, ſome with Hempſeed, and ſome with water, that the tame teaching the wild to eat, and the wild finding ſuch change and alteration of food, they will in twelve or fourteen dayes grow exceeding fat, and fit for the uſe of the Kitchin.

The end of the Poultry.

OF HAWKS.

CHAP. I.

Of the general Cures for all Diſeaſes and Infirmities in Hawks, whether they be ſhort winged Hawks, or long winged Hawks, and firſt of Caſtings.

HAwks are divided into two kinds, that is to ſay, ſhort winged Hawks, as the Goſhawk, and her Tercell, the Sparrow-hawk and her Musket, and ſuch like, whoſe wings are ſhorter then their trains, and do belong to the Ouinger; and long winged Hawks, as the Faulcon gentle, and her Tercell, the Gerfaulcon and Jerkin, the Lanner, Merlin, Hobby, and divers others. Now foraſmuch as their infirmities for the moſt part, proceed from the diſcretion of their Governors, if they flye them out of ſeaſon before they be inſeamed, and have the fat, glut, and filthineſſe of their bodies ſcoured and clenſed out; I think it not amiſſe firſt to ſpeak of Hawks caſtings; which are the naturalleſt and gentleſt purges, or ſcourings a Hawk can take, and doth the leaſt offend the vitall parts. Therefore, you ſhall know, that all Oſtringers do eſteem plumage, and the ſoft feathers of ſmall birds, with ſome part of the skin to be the beſt caſting a ſhort winged Hawk can take; and for the purging of her head, to make her tyre much upon

ſheeps Rumps, the fat cut away, and the bones well covered with parſly. But for long winged Hawks, the beſt caſting is fine Flannell, cut into ſquare pieces of an inch and half ſquare and all to be jagg'd, and ſo given with a little bit of meat. By theſe caſtings you ſhall know the ſoundneſſe and unſoundneſſe of your Hawk: for when ſhe hath caſt, you ſhall take up the caſting, which will be like a hard round pellet, ſomewhat long, and preſſe it between your fingers, and if you find nothing but clear water come from it, then it is a ſign your Hawk is well and luſty; if there come from it a yellowiſh filthy matter, or if it ſtink, it is a ſign of rottenneſſe and diſeaſe; but if it be greazie or ſlimy on the one ſide, then it is a ſign the Hawk is full of greaſe inwardly, which is not broken nor diſſolved: and then you ſhall give her a ſcouring, vvhich is a much ſtronger purgation; and of ſcourings the gentleſt, next caſting, is to take four or five pellets of the yellow root of Selladine well cleanſed from filth, being as big as great peaſe, and give them out of the water earely in the morning when the Hawk is faſting, and it will cleanſe her mightily.

If you take the pellets of Selladine, and give them out of the Oyl of Roſes, or out of the ſirrup of Roſes, it is a moſt excellent ſcouring alſo, onely it will for an hour or two make the Hawk ſomewhat ſickiſh. If you give your Hawk a little *Aloes Cicatrine*, as much as a bean wrapt up in her meat, it is a moſt ſoveraign ſcouring, and both not only avoid greaſe, but alſo killeth all ſorts of Worms whatſoever.

If your Hawk by over-flying, or too ſoon flying, be heated and inflamed in her body, as they are much ſubject thereunto: you ſhall then to cool their bodies, give them ſtones: Theſe ſtones are very fine white pibbles, lying in the Sands of gravelly Rivers, the bigneſſe whereof you may chooſe according to the bigneſſe of your Hawk, as ſome no bigger then a Bean, and thoſe be for Merlyns or Hobbies; ſome as big as two Beans, and they are for Haulcons gentle, Lanners, and ſuch like; and ſome much bigger then they, which are for Gerfaulcons; or ſuch like. And theſe ſtones if they be full of creſts and welts, they are the better, for the rougheſt ſtone is the beſt; ſo it be ſmooth and not greecy. And you ſhall underſtand, that ſtones are moſt proper for long-wing'd Hawks, and the number which you ſhall give at the moſt

muſt

muſt never exceed fifteen, for ſeven is a good number, ſo is nine or eleven, according as you find the Hawks heat more or leſſe, and theſe ſtones muſt ever be given out of fair water, being before very well pickt and trim'd from all durt and filthineſſe. And thus much of Hawks caſtings, ſcourings, and ſtones.

CHAP. II.

Of Impoſtumes in Hawks.

IF your Hawk have any impoſtume riſing from her, which is apparent to be ſeen, you ſhall take ſweet raiſins, and boyl them in Wine, and then cruſhing them, lay them warm to the ſore, and it will both ripen and heal it: onely it ſhall be good to ſcoure your Hawk very well inwardly, for that will abate the flux of all evil humours.

CHAP. III.

Of all ſorts of ſore eyes.

FOr any ſore eye, there is nothing better then to take the juyce of ground Ivy, and drop it into the Eye. But if any Web be grown before you uſe this Medicine, then you ſhall take Ginger finely ſearſt, and blow it into the Eye, and it will break the Web, then uſe the juyce of Ivy, and it will wear it away.

CHAP. IV.

Of the Pantas in Hawkes.

THe Pantas is a ſtooping, or ſhortneſſe of wind in Hawks, and the cure is, to give her the ſcowring of Selladine, and the oyl of Roſes, and then to waſh her meat in the decoction of *Colts foot*, and it will help her.

CHAP. V.

Of caſting the Gorge.

THis is when a Hawk, either through meat which ſhe cannot digeſt, or through ſurfeit in feeding, caſteth up the meat which ſhe hath eaten, which is moſt dangerous. And the onely way to cure her, is to keep her faſting, and to feed her with a very little at once of warm bloudy meat, as not above half a Sparrow at a time, and be ſure never to feed her again, till ſhe have indued the firſt.

CHAP. VI.

Of all ſorts of Worms, or Fylanders in Hawks.

WOrms or Fylanders, which are a kind of Worms in Hawks, are either inward or outward: inward, as in the guts or intrails; or outward, as in any joynt or member: if they be inward, the ſcouring of Aloes is excellent to kill them; but if they be outward, then you ſhall bathe the place with the juyce of the Herb *Ameos* mixt with *Hony*.

CHAP. VII.

Of all ſwelling in Hawks feet, and of the pin in the foot.

FOr the pin in the ſole of the Hawks foot: or for any ſwelling upon the foot, whether it be ſoft or hard, there is not any thing more ſoveraign, then to bathe it in *Patch-greaſe* moulten, and applied to, exceeding hot; and then to fold a fine Cambrick rag dipt in the ſame greaſe about the ſore.

CHAP. VIII.

Of the breaking of a Pounce.

THis is a very dangerous hurt in Hawks, eſpecially in *Gerfaulcons*; for if you break or rive her pounce, or but coape it ſo ſhort that ſhe bleed, though it be very little, yet it will indanger her life: the cure therefore is: preſently upon the hurt, with a hot wyar ſo ſear it, till the bloud ſtaunch, and then to drop about it pitch of Burgundy, and wax mixt together, or for want thereof, a little hard Merchants wax, and that will both heal it, and make the Pounce grow.

CHAP. IX.

Of bones broken, or out of joynt.

IF your Hawk have any bone broken or miſplaced, you ſhall after you have ſet it, bathe it with the Oyl of *Mandrake* and *Swallowes*, mixt together, and then ſplent it, and in nine dayes it will be knit and have gotten ſtrength.

CHAP.

CHAP. X.

Of inward bruiſings in Hawks.

IF your Hawk either by ſtooping amongſt Trees, or by the incounter of ſome fowl, get any inward bruiſe, which you ſhall know by the blackneſſe, or bloudineſſe of their mutes; you ſhall then annoynt her meat every time you feed her, with *Sperma Cœtæ*, till her mutes be clear again, and let her meat be warm and bloudy.

CHAP. XI.

Of killing of Lice.

IF your Haw be troubled with Lice, which is a general infirmity, and apparent, for you ſhall ſee them creep all over on the outſide of her feathers if ſhe ſtand but in the aire of the fire. You ſhall bathe her all over in warm water and Pepper ſmall beaten, but be ſure that the water be not too hot; for that is dangerous; neither that it touch her eyes.

CHAP. XII.

Of the Rye in Hawks.

THis diſeaſe of the Rye in Hawks proceedeth from two cauſes; the one is cold and poze in the head, the other is foul and moſt uncleanly feeding, the Faulconer being negligent to ſeek and cleanſe his Hawks beak and nares, but ſuffering the bloud and filthineſſe of meat to ſtick and cleave thereunto. For indeed, the infirmity is nothing elſe but a ſtopping up of the nares: by means whereof, the Hawk not being able to caſt and avoid the corruption of her head, it turns to putrifaction, and in ſhort ſpace kills the Hawk: and this diſeaſe is a great deal more incident to a ſhort winged Hawks then to long. The ſigns whereof are apparent by the ſtopping of the nares. The cure is to let your Hawk tyre much upon ſinewy and bony meat, as the rumps of Mutton (the fat being taken away) or the pinions of the wings of fowl, either being well lapt in a good handfull of Parſley, and forcing her to ſtrain hard in the tearing of the ſame, and with much diligence to cleanſe and waſh her beak clean with water after her feeding, eſpecially if her meat were warm and bloudy.

CHAP.

CHAP. XIII.

Of the Frounce.

THe Frounce is a Cankerous Ulcer in a Hawks mouth, got by over-flying, or other inflammation proceeding from the inward parts; foul and unclean food is also a great ingenderer of this disease. The signs are a soreneſſe in the Hawks mouth, which sore will be furr'd and cover'd over with white scurf, or such like filthineſſe; also if the Ulcer be deep and ill, the Hawk will wind and turn her head awry, making her beak stand upright; and the cure is to take Allom, and having beaten it to fine powder, mix it with strong Wine-vinegar, till it be somewhat thick, and then wash and rub the sore therewith till it be raw, and that the scurf be clean taken away. Then take the juyce of *Leilian*, and the juyce of *Radish*, and mixing it with Salt, annoint the sore therewith, and in few dayes it will cure it.

CHAP. XIV.

Of the Rhume.

THe Rhume is a continual running, or dropping at the Hakes nares, proceeding from a general cold, or else from over-flying, and then a sudden cold taken thereupon; it stoppeth the head, and breeds much corruption therein, and the signs are the dropping before-said, and a general heavineſſe, and sometimes a swelling of the head. The cure is, to take the juyce of *Beets*, and squirt it oft into the Hawks nares. Then when you feed her, wash her meat in the juyce of *Broomwort*, and it will quickly purge, and set her sound.

CHAP. XV.

Of the Fornicas in Hawks.

THe Fornicas in Hawkes is a hard horn growing upon the back of a Hawk, ingendred by a poysonous and Cankerous Worm, which fretting the skin and tender yellow welt between the head and the beak, occasioneth that hard horn, or excreſſion to grow and offend the bird: the signe is the apparant sight of the horn, and the cure is, to take a little of a Bulls Gall, and beating it with Aloes, annoynt the Hawkes beak therewith morning and

and evening, and it will in very few dayes take the horn away.

CHAP. XVI.

Of the Fiſtula in Hawks.

THe Fiſtula in hawks is a cankerous hollow Ulcer in any part of a hawks body, as it is in mens, beaſts, or any other creature: the ſigns are, a continual mattering, or running of the ſore, and a thin ſharp water like lie, which as it fals from the ſame, will fret the ſound parts as it goeth. The cure is, with a fine ſmall wiar, little ſtronger then a virginal-wiar, and wrapt cloſe about with a ſoft ſleaved ſilk, and the point blunt and ſoft, to ſearch the hollowneſſe and crookedneſſe of the ulcer, which the pliantneſſe of the wiar will eaſily doe; and then having found out the bottome thereof, draw forth the wiar, and according to the bigneſſe of the Orifice, make a tent of fine lint being wet, which may likewiſe bend as the wiar did, and be within a very little as long as the ulcer is deep; for to tent it to the full length is ill, and will rather increaſe then diminiſh the Fiſtula, and therefore ever as the Fiſtula heals, you muſt take the tent ſhorter and ſhorter. But to the purpoſe, when you have made your tent fit, you ſhall firſt take ſtrong Allom-water; and with a ſmall Syringe ſquirt the ſore three or four times therewith, for that will cleanſe, dry, and ſcour every hollowneſſe in the ulcer: then take the tent and annoint it with the juice of the hearb *Rebes*, *Vinegar*, and *Allom* mixt together, and it will dry up the ſore. The Cure.

CHAP. XVII.

Of the privy evill in Hawks.

THe privy evill in hawks is a ſecret heart-ſickneſſe, procured in her by over-flying, corrupt food, cold or other diſorderly keeping; but moſt eſpecially for want of ſtones or caſting in the due ſeaſon: the ſigns are, heavineſſe of head, and countenance, evill enduing of her meat, and foul black mutings. The cure is, to take morning and evening a good piece of a warm ſheeps heart, and ſteeping it either in new Aſſes milk, or new Goats milk, or for want of both, the new milk of a red Cow, with the ſame to feed your hawk, till you ſee her ſtrength and luſt recovered. The Cure.

CHAP. XVIII.

Of wounds in Hawks.

HAwks by the croſs incounters of fouls eſpecially the Heron, by ſtooping amongſt buſhes, thorns, trees, and by divers ſuch accidents, do many times catch ſores and moſt grievous wounds, the ſigns whereof are the outward apparence of the ſame. And the cure is if they be long and deep, and in place that you may conveniently, firſt to ſtitch them up, and then to taint them up with a little ordinary Balſamum, and it is a preſent remedy. But if it be in ſuch a place as you cannot come to ſtitch it up, you ſhall then only take a little lint, and dip it in the juice of the hearb called *Mouſe-ear*, and apply it to the ſore, and it will in ſhort ſpace heal it. But if it be in ſuch a place as you can by no means bind any thing thereunto, you ſhall then only annoint or bathe the place with the aforeſaid juice, and it will heal and dry up the ſame in very ſhort time; the juice of the green hearb called with us, Engliſh Tobacco, will likewiſe do the ſame: for it hath a very ſpeedy courſe in healing and cleanſing, as hath been approved by diuers of the beſt Faulconers of this Kingdome, and other nations.

CHAP. XIX.

Of the Apoplexie, or falling evill in Hawks.

THe Apoplexy, or falling evill in hawks is a certain Vertigo or dizzineſſe in the brain, proceeding from the oppreſſion of cold humours which do for a certain ſpace numb, and as it were mortifie the ſences: the ſigns are, a ſudden turning up the hawks head, and falling from her pearch without bating, but only with a general trembling over all the body, and lying ſo, as it were in a trance a little ſpace; ſhe preſently recovereth, and riſeth up again, but is ſick and heavy many hours after. The cure therefore is, to gather the hearb *Aſterion* when the Moon is in the Wain, and in the ſign Virgo, and taking the juice thereof to waſh your hawks meat therein, and to feed her, and it hath been found a moſt ſoveraign medecine.

The Cure.

CHAP.

CHAP. XX.

Of the purging of Hawks.

THere is nothing more needfull to hawks then purgation, and cleanſings; for they are much ſubject to fat and foulenes of body inwardly, and their exerciſe being much and violent, if there be neglect, and that their glut be not taken away, it will breed ſickneſſe and death; therefore it is the part of every skilful Faulconer, to underſtand how, and when, to purge his hawk, which is generally ever before ſhe be brought to flying, and the moſt uſualleſt ſeaſon for the ſame, is before the beginning of Autumne, for commonly knowing Gentlemen will not flye at the Partridge, till corn be from the ground; and if he prepare for the River early, he will likewiſe begin with that ſeaſon: the beſt purgation then, that you can give your hawk is, *Aloes Cicatrine* wrapt up in warm meat, the quantity of a French peaſe, and ſo given the hawk to eat ever the next morning after ſhe hath flown at any train, or taken other exerciſe, whereby ſhe may break or diſſolve the greaſe within her.

CHAP. XXI.

For a Hawk that cannot mute.

IF your hawk cannot mute, as it is a common infirmity which happeneth unto them, you ſhall take the lean of pork, being newly kild, whilſt it is warm, to the quantity of two Walnuts, and lapping a little *Aloes* therein, give it the hawk to eat, and it will preſently help her. There be divers good Faulconers in this caſe, which will take the roots of Selandine, and having cleanſed it, and cut it into little ſquare pieces as big as peaſe, ſteep it in the oyl of Roſes, and ſo make the hawk ſwallow down three or four of them, and ſure this is very good and wholſome, only it will make the hawk exceeding ſick for two or three hours after. Neither muſt the hawk be in any weak ſtate of body, when this latter medicine is given her. Alſo, you muſt obſerve to keep your hawk at thoſe times exceeding warm, and much on your fiſt, and to feed her moſt with warm birds, leaſt otherwiſe you clung and dry up her entrails too much, which is both dangerous and mortall.

CHAP. XXII.

The assured sign to know when a Hawk is sick.

HAwks are generally of such a stout, strong, and unyielding nature, that they will many times cover and conceal their sicknesses so long, till they be grown to that extremity, that no help of Physick, or other knowledge can availe for their safety: for when the countenance, or decay of stomack, which are the ordinary outward faces of infirmities appear, then commonly is the disease past remedy. Therefore to prevent that evill, and to know sickneſſe whilst it may be cured, you shall take your hawk, and turning up her train, if you see that her tuel or fundament either swelleth or looketh red, or if her eyes or ears likewise be of a fiery complexion, it is a most infallible sign that the hawk is sick, and much out of temper.

CHAP. XXIII.

Of the Feaver in Hawks.

HAwks are as much subject to Feavers, as any creatures whatsoever, and for the most part they proceed from over-flying, or other extraordinary heats, mixt with sudden colds, given them by the negligence of unskilful keepers. And the cure is, to set her in a cool place, upon a pearch, wrapt about with her cloaths, and feed her oft with a little at a time of chickens flesh steeped in water, wherein hath been soaked Cucumber-seeds. But if you find by the stopping of her ears or head, that she is offended more with cold then heat, then you shall set her in a warm place, and feed her with the bloody flesh of pigeons, washt either in white-wine, or in water, wherein hath been boyled either Sage, Marjoram, or Camomill.

The Cure.

CHAP. XXIV.

To help a Hawk that cannot digest her meat.

IF your Hawk be hard of digestion, and neither can turn it over, nor empty her panel, which is very often seen, you shall then take the heart of a Frog, and thrust it down into her throat, and pull it back again by a thread fastned thereunto once or twice suddenly, and it will make her cast her gorge presently.

CHAP.

CHAP. XXV.

Of the Gout in Hawks.

HAwks, eſpecially thoſe which are free and ſtrong ſtrikers, are infinitely ſubject to the Gout, which is a ſwelling, knotting, and contracting of a Hawks feet: The cure thereof is, to take two or three drops of blood from her thigh-vein, a little above her knee, and then annoint her feet with the juyce of the hearb Hollihock, and let all her pearch be annointed alſo with tallow, and the juyce of that hearb mixt together. Now if this diſeaſe, (as oft it hapneth) be in a Hawks wing, then you ſhall take two or three drops of blood from the vein under her wing, and then annoint the pinions and inſide thereof, with *Unguentum de Althea* made very warm, which you may buy of every Apothecary. The Cure.

CHAP. XXVI.

Of the ſtanching of blood.

IT is a known experience amongſt the beſt Faulconers, that if the Gerfaulcon ſhall but loſe two or three drops of blood it is mortal, and the hawk will die ſuddenly after; which to prevent, if the blood proceed from any pounce, which is moſt ordinary, then upon the inſtant hurt, you ſhall take a little hard Merchants wax, and drop it upon the ſore, and it will preſently ſtop it; if it be upon any other part of the hawks body, you ſhall clap thereunto a little of the ſoft down of a Hare, and it will immediately ſtanch it; without theſe two things, a good Faulconer ſhould never go, for they are to be uſed in a moment. And thus much of the hawk and her diſeaſes.

Of Bees.

CHAP. I.

Of the nature, ordering, and preſervation of Bees.

OF all the creatures which are behoveful for the uſe of man, there is nothing more neceſſary, wholeſome, or more profitable, then the Bee, nor any leſſe troubleſome, or leſſe chargeable. To ſpeak firſt of the nature of Bees, it is The nature of a Bees.

a creature gentle, loving, and familiar about the man, which hath the ordering of them, ſo he come neat, ſweet and cleanly amongſt them, otherwiſe if he have ſtrong, and ill ſmelling ſavours about him, they are curſt and malicious, and will ſting ſpitefully, they are exceeding induſtrious and much given to labour, they have a kind of government amongſt themſelves, as it were a well-ordered Common-wealth, every one obeying and following their King or Commander, whoſe voice (if you lay your ear to the hive) you ſhall diſtinguiſh from the reſt, being louder and greater, and beating with a more ſolemn meaſure. They delight to live amongſt the ſweeteſt hearbs, and flowers, that may be, eſpecially Fennel, and wall Gilly-flowers, and therefore their beſt dwellings are in gardens: and in theſe gardens, or neer adjoyning thereunto, would be divers fruit trees growing, chiefly plum-trees, or peach-trees; in which, when they caſt, they may knit, without taking any far flight, or wandring to find out their reſt: this garden alſo would be well fenced, that no Swine nor other Cattell may come therein, as well for overthrowing their hives, as alſo for offending them with other ill ſavours. They are alſo very tender, and may by no means indure any cold; wherefore you muſt have a great reſpect to have their houſes exceeding warm, cloſe, and tight, both to keep out the froſt and ſnow, as alſo the wet and rain; which if it once enter into the hive, it is a preſent deſtruction.

Of the Bee hive.

To ſpeak then of the Bee-hive, you ſhall know there be divers opinions touching the ſame, according to the cuſtomes and natures of Countries; for in the champian Countries, where there is very little ſtore of woods, they make their Hives of long Rye ſtraw, the rouls being ſowed together with bryers; and theſe hives are large and deep, and even proportioned like a Sugar-loafe, and croſſe-barr'd within, with flat ſplints of wood, both above and under the midſt part. In other champian Countries where they want Rye ſtraw, they make them of Wheat-ſtraw, as in the Weſt Countries, and theſe hives are of a large compaſſe, but very low and flat, which is naught, for a hive is better for his largeneſſe, and keepeth out the rain beſt when it is ſharpeſt. In the wood Countries, they make them of cloven haſels, watteld about, broad ſplints of aſh, and ſo formed, as before I ſaid, like a Sugar-loafe.

And

And theſe hives are of all other the beſt, ſo they be large and ſmooth within, for the ſtraw hive is ſubject to breed mice, and nothing deſtroyeth Bees ſooner then they, yet you muſt be governed by your ability, and ſuch things as the ſoyl affords.

Now for the Wood-hive which is the beſt, you ſhall thus trim and prepare it for your Bees: you ſhall firſt make a ſtiff morter of lime and Cow dung, mixed together; and then having croſs barred the hive within, daub the out-ſide of the hive with the morter, at leaſt three inches thick, down cloſe unto the ſtone; ſo that the leaſt air may not come in: then taking a Rye-ſheafe, or Wheat-ſheafe, or two that is balted, and not thraſhed, and chuſing out the longeſt ſtraws, bind the ears together in one lump, put it over the hive, and ſo as it were thatch it all over, and fixe it cloſe to the hive with an old hoop, and this will keep the hive inwardly as warm as may be: alſo, before you lodge any Bee in your hive, *you ſhall perfume it with Juniper, and rub it all within with Fennell, Iſop, and Time flowers; and alſo the ſtone upon which the hive ſhall ſtand.* Of the trimming of the Hive.

Now for the placing of your hive, you ſhall take three long thick ſtakes, cut ſmooth and plain upon the heads, and drive them into the earth triangular wiſe, ſo that they may be about two foot above the ground: *then lay over them a broad ſmooth paving ſtone, which may extend every way over the ſtakes above half a foot: and upon the ſtone ſet your hive, being leſſe in compaſs then the ſtone by more then ſix inches every way; and ſet the door of your hive ſtand directly upon the riſing of the morning Sun, inclining a little unto the Southward: and be ſure to have your hives well ſheltred from the North winds, and generally from all tempeſtuous weather: for which purpoſe if you have ſheads to draw over them in the winter, it is ſo much the better. And you ſhall place your hives, in orderly rowes one before another, keeping clean allies between them every way, ſo as you may walk and view each by it ſelfe ſeverally.* The placing of hives

Now for the caſting of your Bees, it is earlier or latter in the year, according to the ſtrength and goodneſſe of the Stock, or the warmth of the weather. The uſuall time for caſting, is from the beginning of *May*, till the middle of *July*: and in all that time you muſt have a vigilant eye, or elſe ſome ſervant to watch their riſing, leſt they flye away, and kn t in ſome obſcure place far from

from your knowledge: yet if you pleaſe, *you may know which hives are ready to caſt a night before they do caſt, by laying your ear after the Sun-ſet to the hive, and if you hear the Maſter Bee above all the reſt, in a higher and more ſolemn note, or if you ſee them lye forth upon the ſtone, and cannot get into the hive, then be ſure that ſtock will caſt within few hours after.*

As ſoon as you can perceive the ſwarm to riſe, and are got up into the ayr (*which will commonly be in the height and heat of the Sun*) you ſhall take a braſſe *Baſon*, *Pan*, or *Candleſtick*, and make a tinkling noiſe thereupon, for they are ſo delighted with muſick, that by the ſound thereof they will preſently knit upon ſome branch or bough of a tree. Then when they are all upon one cluſter, you ſhall take a new ſweet hive well dreſt, and rubb'd with Hony and Fennel, and ſhake them all into the hive; then having ſpread a fair ſheet upon the ground, ſet the hive thereon, and cover it all clean over cloſe with the ſheet, and ſo let it ſtand till after Sun-ſet; at which time the Bees being gathered up to the top of the hive (as their nature is) you ſhall ſet them upon the ſtone, having rubb'd it with Fennel; and then daub it cloſe round about with lime and dung mixt together, and only leave them a door or two to iſſue out and in at. There be ſome ſtocks, which will caſt twice or thrice, and four times in a year; but it is not good, for it will weaken the ſtock too much; therefore to keep your ſtocks in ſtrength and goodneſſe, it is not good to ſuffer any to caſt above twice at the moſt.

Again, you ſhall with pieces of brick, or other ſmooth ſtones, raiſe the ſtock in the night, three or four inches above the ſtone, and then daub it cloſe again, and the Bees finding houſe-room, will fall to work within, and not caſt at all; and then will their ſtocks be worth two others: and in the ſame manner, if you had the year before any ſmall ſwarms; which are likely to caſt this year, or if you have any early ſwarms this year, which are likely to caſt at the latter end of the year: both which are often found to be the deſtruction of the ſtocks: in either of theſe caſes, you ſhall inlarge the hive, as it is before ſaid, by raiſing it up from the ſtone, and it will not only keep them from caſting, but make the ſtock better, and of much more profit; for that hive which is of the moſt weight, is of the beſt price.

Now

Now when you have mark't out thoſe old Stocks, which you intend to ſell (*for the oldeſt is fitteſt for that purpoſe*) you ſhall know that the beſt time to take them is at Michaelmas, before any froſts hinder their labour: and you ſhall take them ever from the ſtone in the dark of night, when the aire is cold, and either drown them in water, or ſmother them with Fusbals; for to chaſe them from their Hives as ſome do, is naught, becauſe all ſuch Bees as are thus frighted from their Hives, do turn robbers; and ſpoyl other ſtocks becauſe that time of the year will not ſuffer them to labour, and get their own livings.

Now if you have any weak Swarms which coming late in the year cannot gather ſuffi.ient of Winter proviſion; in this caſe you ſhall feed ſuch ſtocks by dayly ſmearing the ſtone before the place of their going in and out, vvith Hony and Roſe-water mixt together, and ſo you ſhal continue to do all the ſtrength of Winter, till the vvarmth of the Spring, and the Sun-ſhine bring forth ſtore of flowers for them to labour on. You ſhall continually look that no Mice, and ſuch like Vermine breed about Hives, for they are poyſonous, and vvill make Bees forſake their Hives.

Now laſtly, if any of your ſtocks happen to dye in the Winter (as amongſt many, ſome muſt quaile) you ſhall not by any means ſtir the ſtock, but let it remain till the Spring, that vvhen you ſee your Bees begin to grow buſie: then take up the dead ſtock, and trim it clean from all filth, but by no means ſtur, or cruſh any of the Combs, then daſh the Combs, and beſprinkle them, and beſmear all the inſide of the Hive with Hony, Roſe-water, and the juyce of Fennel mixt together, and daub alſo the ſtone therewith. Alſo then ſet down the Hive again, and daub it as if it had never been ſtirred, and be well aſſured, that the firſt Swarm which ſhall riſe, either of your own, or of any Neighbours of yours within the compaſſe of a mile, it will knit in no place, but within that Hive, and ſuch a ſtock will be worth five others, becauſe they find half their work finiſht at their firſt entrance into the Hive, and this hath been many times approved by thoſe of the moſt approved'ſt experience. And thus much touching the Bee and his Nature.

A Plat form for Ponds, which the Printer hath added to this ensuing discourse, for the better satisfaction and delight of such as having a convenient plat of ground for the same purpose, shall be desirous to make any Ponds for the increase and store of Fish.

G. The Gate.

D. The Ditch and Quickset Hedge.

W. The Walks.

B. The Bridge.

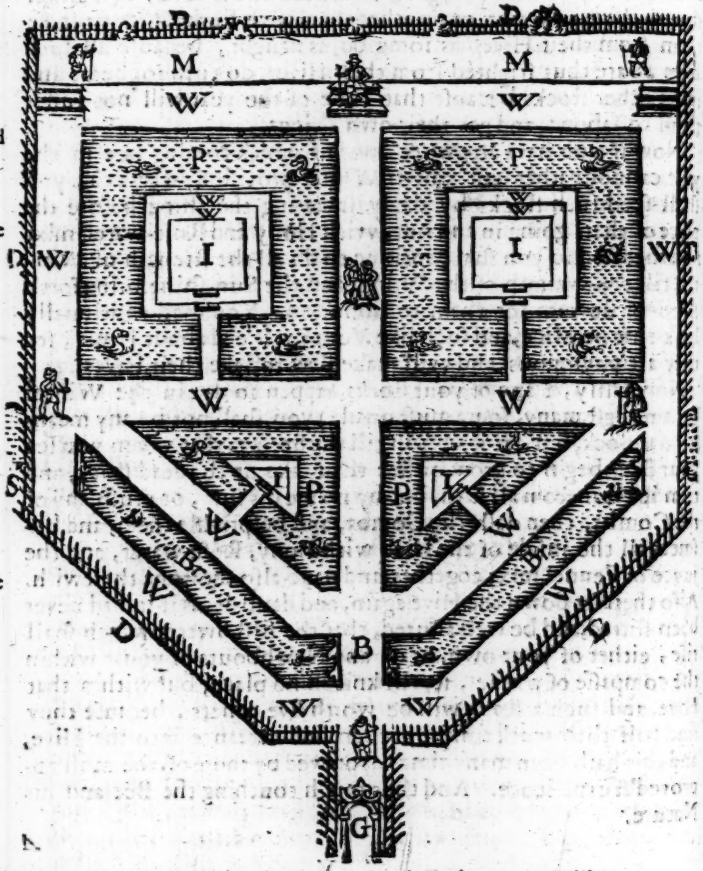
Br The Brook.

P. The Ponds.

I. The Pensiles.

M. The Mount.

S The Spring.



The Walks about the Ponds may be planted with Fruit trees, or Willows.

Of

Of Fiſhing.

CHAP. I.

Of Fiſhing in generall; and firſt of the making of the Fiſh-Pond.

Forasmuch as great Rivers doe generally belong either to the King, or the particular Lords of ſeverall Mannors, and that it is onely the Fiſh-pond which belongeth to private perſons, I will as a thing moſt belonging to the generall profit, heat treat of Fiſh-ponds. And firſt touching the making of them, you ſhall underſtand that the grounds moſt fit to be caſt into Fiſh-ponds, are thoſe which are either mariſh, boggy, or full of Springs, and indeed moſt unfit either for grazing, or any other uſe of better profit. And of theſe grounds, that which is full of clear ſprings will yield the beſt water; that which is mariſh will feede Fiſh beſt; and that which is boggy, will defend the Fiſh from being ſtolne.

Having then ſuch a peece of waſte ground, and being determined to caſt it into a Fiſh-pond: you ſhall firſt by ſmall trenches, draw all the ſprings or moiſt veins into one place, and ſo draine the reſt of the ground, and then having markt out that part which you mean to make the head of your pond, which although it be the loweſt part in the true levell of the ground, yet you ſhall make it the higheſt in the eye; you ſhall firſt cut the trench of your flood-gate, ſo as the water may have a ſwift fall, when you mean at any time to let it out; and then on each ſide of the trench drive in great ſtakes of ſix foot in length; and ſix inches ſquare, of Oak, Aſh, or Elm, but Elm is the beſt, and theſe you muſt drive in rowes within four foot one of another, at leaſt four foot into the earth, as broad and as farre off each ſide the Floud-gate as you intend the head of your Pond ſhall go; then begin to dig your Pond of ſuch compaſſe as your ground will conveniently give leave, and all the earth you digge out of the

Pond, you ſhall carry and throw amongſt the ſtakes, and with ſtrong rammers ramme the earth hard between them, till you have covered all the ſtakes; then drive in as many more new ſtakes beſides the heads of the firſt, and then ramme more earth over and above them alſo; and thus do with ſtakes above ſtakes, till you have brought the head ſides to ſuch a convenient height as is fitting. And in all this worke have a ſpecial care, that you make the inſide of your banks ſo ſmooth, even, and ſtrong, that no current of the water may wear the earth from the ſtakes.

You ſhall digge your Fiſh pond not above eight foot deep, and ſo as it may carry not above ſix foot water.

You ſhall pave all the bottome and banks of the Pond with large ſods of Flot-graſſe, which naturally growes under water, for it is a great feeder of Fiſh: and you ſhall lay them very cloſe together, and pinne them downe faſt with ſmall ſtakes and windings. You ſhall upon one ſide of the Pond, in the bottome, ſtake faſt divers Bavens or Faggots of bruſh-wood, wherein your Fiſh ſhall caſt their Spawn, for that will defend it from deſtruction; and at another place you ſhall lay ſods upon ſods, with the graſſe ſides together, in the bottom of the pond, for that will nouriſh and breed Eeles: and if you ſtick ſharp ſtakes likewiſe by every ſide of the Pond, that will keep theeves from robbing them. When you have thus made your Ponds, and have let in the water, you ſhall then ſtore them; Carp, Bream, and Tench by themſelves; and Pike, Pearch, Eele, and Tench by themſelves: for the Tench being the Fiſhes Phyſitian is ſeldome devoured: alſo in all Ponds you ſhall put good ſtore of Roch, Dace Loch, and Menew; for they are both food for the greater Fiſhes, and alſo not uncomely in any good man's diſh.

You ſhall to every Meſter put three Spawners, and ſome put five, and in three years the increaſe will be great, but in five hardly to bee deſtroyed. And thus much for Ponds and their ſtorings.

CHAP. II.

Of the taking of all ſorts of Fiſh, with Nets, or otherwiſe.

IF you will take Fiſh with little or no trouble, you ſhall take of *Salarmoniack* aquarter of an ounce, of young *Chives*, and as much of a Calves-Kell, and beat them in a morter untill it be all

one

one ſubſtance, and then make Pellets thereof, and caſt them into any corner of the Pond, and it will draw thither all the Carp, Bream, Cheven, or Barbell, that are within the water; then caſt your ſhove net beyond them, and you ſhall take choice at your pleaſure. If you will take Roch, Dace, or any ſmall kind of Fiſh, take Wine-lees, and mixe it with Oyle, and hang it in a Chimney corner till it be dry, or look black; and then putting it into the water, they will come ſo abundantly to it, that you may take them with your hand. If you will take Trout, or Grailing, take two pownd of Wheat branne, half ſo much of white Peaſe, and mixing them with ſtrong brine, beat it till it come to a perfect paſte: then put Pellets thereof into any corner of the water, and they will reſort thither, ſo as you may caſt your Net about them at your pleaſure. But if you will take either Pearch or Pike, you ſhall take ſome of a Beaſts Liver, black Snails, yellow Butterflies, Hogs blood, and Opoponax, beat them altogether, and having made a paſte thereof, put it into the water, and be aſſured that as many as are within forty paces thereof, willl preſently come thither, and you may take them at your pleaſure.

Laſtly, If you take either two drams of Cock-ſtones, or twice ſo much of the Kirnels of Pine apple tree burnt, and beat them well together, and make round balls thereof, and put it into the water, either freſh or ſalt, any Salmon or great Fiſh will preſently reſort thither; you may take them either with Net or otherwiſe.

Alſo it is a moſt approved experiment, that if you take bottles made of Hay, and green Oziers, or Willow mixt together, and ſink them down in the middeſt of your Pond, or by the bankſides, and ſo let them reſt two or three dayes, having a cord ſo faſtned unto them, that you may twich them up on Land at your pleaſure: and believe it, all the good Eeles which are in the Pond will come unto thoſe bottles: and you ſhall take them moſt abundantly: and if you pleaſe to bait thoſe Bottles, by binding up Sheeps guts, or other garbage of beaſts within them, the Eeles will come ſooner, and you may draw them oftner, and with better aſſurance. There be other wayes beſides theſe to take Eels, as with Weeles, with the Eele-ſpear, or with bobbing for them with great worms; but they are ſo generally known and practi-

ſed

ſed, and ſo much inferiour to this already ſhewed, that I hold it a needleſſe and vaine labour to trouble your ears with the repetitions of the ſame; and the rather, ſith in this work I have laboured onely to declare the ſecrets of every knowledge, and not to run into any large circumſtance of thoſe things which are moſt common and familiar to all men. And thus much of Fiſh and Fiſh-ponds, and their general knowledge. Now as touching the Angle, and the ſecrets thereto belonging, you ſhall find it at large handled in the next Book called *Country Contentments.*

FINIS.

The Table of the firſt Book.

Of Beaſts.

Of the Horſe.

OF the Horſe in general p. 1
Nature of Horſes 2
Choice of Horſes, and their ſhapes ib
Colours of Horſes ib
Horſes for a Princes ſeat 3
Horſes for travell ib
Hunting Horſes ib
Running Horſes ib
Coach Horſes 4
Pack Horſes ib
Cart Horſes ib
Of Mares ib
Ordering Horſes for ſervice 5
Ordering Horſes for a Princes ſeat ib
Ordering of travelling Horſes ib
Ordering of Hunting Horſes 6
Ordering of Running Horſes ib
Ordering of Coach Horſes 7
Ordering of the Pack, or Cart-Horſe ib
The preſervation of Horſes ib
Of riding in general 8
Imperfect uſe of this recreation. ib
The pleaſure of riding ib
The Authors Apology 9
The taming of a young Colt. ib
His ſadling and bridling 10
His firſt backing ib
Three main points of a Horſmans ſkill. 12
Of helps, and what they be ib
Of corrections, and which they be ib
Of cheriſhings 13
Of the Muſrole and Martingale ib
Of treading the large rings 14
Choice of grounds ib
Of galloping large rings 15
Helps in the large ring turns 16
Corrections in the ring turns ib
Cheriſhing in the ring turns 17
Of ſtopping and going back ib
Helps 18
Corrections ib
Cheriſhings ib
Of advancing before 19
Helps ib
Corrections ib
Cheriſhings 20
The uſe of advancing ib
Of yerking behind ib
Helps 21
Corrections ib
Cheriſhings ib
Of turning ib

Helps

Helps 23
Corrections ib
Cherishings ib
Of the turning-post 24
Of managing 25
Diversities of manages 26
Of the Cariere ib
Horses for pleasure 27
Of bounding aloft ib
Of the Corvet ib
Of the Gallop Galliard 28
Of the Capriolle 29
Of going aside ib
Of riding before a Prince 30
Of the Caragolo ib
To ride for recreation 31
Of breeding of all sorts of Horses, fit for the Husbandmans use ib
Grounds to breed on 32
Division of Grounds 33
Choice of the Stallion ib
Choice of Mares ib
When to put them together ib
Of covering Mares ib
To know if a Mare hold 34
To conceive Male foals ib
To provoke lust ib
To keep Mares from barrennesse ib
Ordering Mares after covering ib
A help for Mares in foaling 35
Ordering Mares after foaling ib
Weaning of foals ib
Ordering after weaning ib
Gelding of Colts 36
Of Horses for travell, and how to make them amble ib
The marks of a good travelling Horse ib
To make a Horse amble ib
Divers wayes of ambling 37
Of travelling ib
Of wisping ib
Helps in ambling ib
The ordering and dieting of the Hunting-horse 38
Taking up the Hunting horse ib
Cloathing the Hunting horse ib
Dressing the Hunting horse 39
Of watring and feeding the Hunting-horse 40
The exercise of the horse 42
The scouring of the horse ib
Ordering a horse after exercise ib
Of ordring, dyeting, taking up, cloathing, dressing, watering, and feeding the Running horse 42
Of his exercise by ayring and coursing 45
Of sweats ib
Of scouring him ib
Ordering after exercise ib
General rules for a running horse 46
General all rules for a travelling horse 47
How to cure all inward sicknesses 48
Of the head-ach, renzie, or Staggers ib
Of the sleeping evil 49
Of the, falling-evill, Planet struck

ſtruck Night-mare, or Palſie. ib.
Of the general cramp, or convulſion of ſinews 50
Of any cold or cough, wet or dry, or for any conſumption or putrefaction of the Lungs whatſoever ib
Of the running Glaunders, or mourning of the chines ib
Of hide-bound, or conſumption of the fleſh 51
Of the breaſt pain, or any ſickneſſe of the heart ib
Of tyred horſes ib
Of diſeaſes of the ſtomack, as ſurfeits, loathing of meat, or drink 52
Of foundring in the body ib
Of the Hungry-evill ib
Of diſeaſes in the Liver, &c. 53
Of the Yellowes and diſeaſes of the Gall ib
Of the ſickneſſe of the ſpleen ib
Of the dropſie, or evil habit of the body 54
Of the Chollick, belly-ake, or belly-bound ib
Of the lax, or bloody flux ib
Of the falling of the Fundament 55
Of Bots and Worms of all ſorts ib
Of pain in the Kidneys, pain to piſſe, and ſtone ib
Of the ſtrangullion ib
Of piſſing blood ib
Of the Colt evill, mattering of the yard, falling of the yard, ſhedding of ſeed 56
Of the particular diſeaſes of Mares, as barrenneſs, conſumption, rage of love, caſting foals, hardneſſe to foal, and to make a Mare caſt her foal ib
Of drinking venome, &c. 57
Of ſuppoſitaries, Gliſters, and Purgations ib
Of nezing, and frictions 58
Of all the diſeaſes in the eies ib
Of the impoſtume in the eare, Pole-evill, Fiſtula, ſwelling after blood-letting, any gald-back, Canker, ſitfaſt, wens, navel-gall, &c. ib
Of the Vives 59
Of the ſtrangle, bile, botch, or Impoſtume ib
Of the Canker in the noſe, or any other part ib
Of ſtanching blood in any part ib
Of the diſeaſes in the mouth, as bloody rifts, Figs, Lampas, Camery, Inflammation, tongue-hurt, or the barbs 60
Of pain in the teeth, or looſe teeth. ib
Of the crick in the neck ib
Of the falling of the Creſt, manginеſſe in the main, or ſhedding of hair 61
Of pain in the Withers ib
Of ſwaying the back, or weakneſſe in the back ib
Of the itch in the tayle, ſcab, manginoſſe, farcy ib

Of any halting whatſoever, &c. ib
Of foundring in the feet 62
Of the ſplent, curb, bone-ſpaven, or any knob, or bony excreſſion or ring-bone 63
Of the Maſſander, Sellander, Pains, Scratches, Mallat, Mules, Crown-ſcab, &c. ib
Of any upper attaint, or neather, or any over-reaching ib
Of all the infirmities of, in, or about the hoves, &c. 64
Of the blood-ſpaven, hough, bony, or any other unnatural ſwelling ib
Of wind-gals ib
Of enterfearing, ſhackle-gall, &c. ib
Hurts on the cronet, as quilter, bone, or matlong ib
Of wounds in the foot, gravelling pricking, fig, retrait, or cloying 66
To draw out ſtub, or thorn ib
Of any Ambury, or Tetter ib
Of the cords, or ſtring-halt ib
Of ſpur-galling, &c. 67
To heal any ſore or wound ib
Of ſinewes cut ib
Of eating away dead fleſh ib
Of knots in joynts ib
Of venomous wounds, &c. ib
Of Lice or Nits ib
To defend a horſe from flies 68
Of bones broken, or out of joynt ib
Of drying or skinning ſores, when they are almoſt whole ib
A moſt famous receipt, to make a horſe that is lean, and that is full of inward ſickneſſe, ſound, and fat, in fourteen dayes ib
To make a white ſtar 69

Of the Bull, Calfe, Cow, or Oxe.

OF the Bull, Cow, Calfe, or Oxe, &c. 69
The Countries for breed 70
Of not mixing, and mixing breeds ib
The ſhape of the Bull ib
The uſe of the Bull ib
The ſhape of the Cow ib
The uſe of the Cow 71
Of Calves, and their nouriſhing ib
Obſervations for Calves ib
Of the Oxe, and his uſe ib
Of the Oxes food for labour 72
Oxen to feed for the Butcher ib
To preſerve Cattel in health ib
Of the Feaver in Cattel 73
Of any inward ſickneſſe ib
Of the diſeaſes in the head, as the ſturdy, &c. ib
Of all the diſeaſes in the eyes of cattell, &c. ib
Of diſeaſes in the mouth, as barbs bleans, &c. 74
Of diſeaſes in the neck, as being galled, bruiſed, ſwoln, cloſe, &c. 75
Of the Peſtilence, Gargill, or Murrain ib

Of

Of miſliking, or leanneſſe 76
Of diſeaſes in the gut, as flux, coſtiveneſſe ib
Of piſſing blood ib
Of dropping noſtrils, or any cold ib
Of all manner of ſwellings 77
Of the worm in the tayl ib
Of any cough or ſhortneſſe of breath ib
Of any Impoſtume, Bile, or Botch ib
Of diſeaſes in the ſinewes, as weakneſſe, ſtiffneſſe, or ſoreneſs ib
Of the generall ſcab, particular ſcab, or ſcurfe 78
Of the hide-bound, or dry skin ib
Of diſeaſes in the lungs, as lung-grown, &c. ib
Of the biting with a mad dog, or other venomous beaſts 79
Of the falling down of the palate ib
Of any pain in the hoofe as the ſoal, &c. ib
Of all kind of bruiſings 80
Of ſwallowing hens-dung, or any poyſon ib
Of killing Lice, or Ticks ib
Of the dew-bowle ib
Of the loſſe of the Cud 81
Of the killing of all ſorts of worms ib
Of vomiting blood ib
Of the Gout ib
Of the milting ib
Of provoking a beaſt to piſſe 82
Of the over-flowing of the gall. ib
Of a beaſt that is goared ib
Of the Cow that is wethered ib
Of drawing out of thorns, or ſtubs ib
Of purging cattell ib
Of being ſhrew-run 83
Of faintneſſe ib
Of breeding milk in a Cow ib
Of bones out of joint or broken. ib
Of the rot in Beaſts ib
Of the Pantas 84
Of all manner of wounds ib

Of the Sheep.

OF Sheep, their uſe, choice, ſhape and preſervation 84
Of the ſtaple of wool ib
Of the Lear of ſheep ib
The ſhape of Sheep 6
When Ews ſhould bring forth ib
Ordering of Lambs ib
Needfull obſervations 87
The preſervation of Sheep ib
The ſigns to know a ſound ſheep, and an unſound 88
Of ſickneſſe in Sheep, as the feaver, &c. ib
Of the generall ſcab ib
Of killing Maggots 89
Of the Red-water ib
Of lung-ſick, or any cough, or cold ib
Of the worms in the claw, or in any

any other part ib
Of wild fire ib
Of the diseases of the gall, as Choller, Jaundie, &c. 90
Of the tough flegm, or stoppings ib
Of the bones broken, or out of joint ib
Of any sickneſſe in Lambs ib
Of the ſturdy turning-evill, or more-ſound 91
Of all diſeaſes in the eyes in generall ib
Of water in a Sheeps belly ib
Of the tag'd or belt Sheep ib
Of the Pox in Sheep 92
Of the wood-evill or cramp ib
Of making an Ewe love her own Lamb, or any other Ewes Lamb ib
Of licking up poyſon ib
Of Lambs, yeaned ſick 93
Of making an Ewe to be eaſily delivered ib
Of teeth looſe ib
Of increaſing milke ib
Of the Staggers, or leaf-ſickneſs ib
Of all ſorts of wo·ms ib
Of the loſſe of the end 94
Of ſaving ſheep from the rot ib
A few precepts for the Shepherd ib

Of Goats.

OF Goats, and their natures 96
The ſhape of Goats ib
The ordering of Goats ib
Of any inward ſickneſſe, as the peſtilence, &c. 97
Of the dropſie ib
Of ſtopping the Teats 98
Of Goats that cannot kid ib
Of the Tetter, or dry Scab ib
Of gelding Kids ib
Of the itch in Goats 99
Of the tuell ſtopping ib
Of the Staggers ib

Of Swine.

OF all manner of Swine 99
The nature of Swine ib
Of the choice and ſhape of Swine ib
Of the uſe and profit of Swine 101
Of the Feaver, or any hidden ſickneſſe in Swine 102
Of Murraine, Peſtilence, or Catarrhe ib
Of the Gall in Swine ib
Of the Meazels 103
Of the Impoſtumes in any part ib
Of vomiting ib
Of leanneſſe, miſlike, ſcurfe, or mangineſſe ib
Of

The Table.

Of the sleeping evill 104
Of pain in the Milt ib
Unnaturalneſſe in Swine ib
Of the laxe or flux ib
Of the lugging of Swine with dogs 106
Of the pox in Swine ib
Of killing Maggots in any part ib
Of feeding Swine either for Bacon or Lard. ib
Of feeding Swine in wood-countries 106
Of feeding at the reek ib
Of feeding Swine in or about great Cities ib
Of feeding Hogs for Lard, or Bores for Brawn ib

Of Conies.

Of tame Conies in generall 108
The nature of the cony ib
Of boxes for tame conies ib
Of the choice and profit of rich conies 108
Of the feeding and preſervation of conies 109
Of the rot amongſt conies 110
Of madneſſe in conies ib

The Table of the Second Book.

Of Poultry.

Of the Dunghil Cock, Hen, Chicken, and Capon. 111 to 112
Of the Dunghill cock ib
Of the choice and ſhape of the cock ib
Of the Henne, her choyce and ſhape ib
Of ſetting Hens 112
Of the choice of egs ib
Of chickens 114
Of feeding & cramming chickens ib
Of preſerving egs ib
Of gathering egs 115
Of the Capon, and when to carve him ib
Of the Capon to lead Chickens. ib
Of feeding and cramming capons ib
Of the pip in Poultry 116
Of the roup ib
Of the flux ib
Of ſtopping in the belly ib
Of lice in Poultry ib
Of ſtinging with venomous worms 117
Of all ſore eyes ib
Of Hens which crow ib
Of Hens which eat their egs ib
Of keeping a Hen from ſitting ib
Of making Hens lay ſoon and oft ib

Of

any other part ib
Of wild fire ib
Of the diseases of the gall, as Choller, Jaundie, &c. 90
Of the tough flegm, or stoppings ib
Of the bones broken, or out of joint ib
Of any sickneſſe in Lambs ib
Of the ſturdy turning-evill, or more-found 91
Of all diſeaſes in the eyes in generall ib
Of water in a Sheeps belly ib
Of the tag'd or belt Sheep ib
Of the Pox in Sheep 92
Of the wood-evill or cramp ib
Of making an Ewe love her own Lamb, or any other Ewes Lamb ib
Of licking up poyſon ib
Of Lambs, yeaned ſick 93
Of making an Ewe to be eaſily delivered ib
Of teeth looſe ib
Of increaſing milke ib
Of the Staggers, or leaf-ſickneſs ib
Of all ſorts of worms ib
Of the loſſe of the end 94
Of ſaving ſheep from the rot ib
A few precepts for the Shepherd ib

Of Goats.

OF Goats, and their natures 96
The ſhape of Goats ib
The ordering of Goats ib
Of any inward ſickneſſe, as the peſtilence, &c. 97
Of the dropſie ib
Of ſtopping the Teats 98
Of Goats that cannot kid ib
Of the Tetter, or dry Scab ib
Of gelding Kids ib
Of the itch in Goats 99
Of the tuell ſtopping ib
Of the Staggers ib

Of Swine.

OF all manner of Swine 99
The nature of Swine ib
Of the choice and ſhape of Swine ib
Of the uſe and profit of Swine 101
Of the Feaver, or any hidden ſickneſſe in Swine 102
Of Murraine, Peſtilence, or Catarrhe ib
Of the Gall in Swine ib
Of the Meazels 103
Of the Impoſtumes in any part ib
Of vomiting ib
Of leanneſſe, miſlike, ſcurfe, or mangineſſe ib

Of

The Table.

Of the sleeping evill 104
Of pain in the Milt ib
Unnaturalneſſe in Swine ib
Of the laxe or flux ib
Of the lugging of Swine with dogs 106
Of the pox in Swine ib
Of killing Maggots in any part ib
Of feeding Swine either for Bacon or Lard. ib
Of feeding Swine in wood-countries 106
Of feeding at the reek ib
Of feeding Swine in or about great Cities ib
Of feeding Hogs for Lard, or Bores for Brawn ib

Of Conies.

Of tame Conies in generall 108
The nature of the cony ib
Of boxes for tame conies ib
Of the choice and profit of rich conies 108
Of the feeding and preſervation of conies 109
Of the rot amongſt conies 110
Of madneſſe in conies ib

The Table of the Second Book.

Of Poultry.

Of the Dunghil Cock, Hen, Chicken, and Capon. 111 to 112
Of the Dunghill cock ib
Of the choice and ſhape of the cock ib
Of the Henne, her choyce and ſhape ib
Of ſetting Hens 112
Of the choice of egs ib
Of chickens 114
Of feeding & cramming chickens ib
Of preſerving egs ib
Of gathering egs 115
Of the Capon, and when to carve him ib
Of the Capon to lead Chickens. ib
Of feeding and cramming capons ib
Of the pip in Poultry 116
Of the roup ib
Of the flux ib
Of ſtopping in the belly ib
Of lice in Poultry ib
Of ſtinging with venomous worms 117
Of all ſore eyes ib
Of Hens which crow ib
Of Hens which eat their egs ib
Of keeping a Hen from ſitting ib
Of making Hens lay ſoon and oft ib

Of

Of making Hens lean 118
Of the Crow-trodden ib
Of the Henne-houſe ſcituation ib

Geeſe.

OF the Gooſe in generall 119
Of the choice of Geeſe ib
Of laying egs, and ſitting ib
Of the ordering of Goſlings 120
Of green Geeſe, and their fatting ib
Of Ganders ib
Of fatting of elder Geeſe ib
Of gathering of Geeſe feathers ib
Of the gargel in Geeſe ib

Of Turkies.

OF Turkies in gencral 121
Of the choice of the Turkey Cock ib
Of the Turkey Hen, and her ſitting ib
Of the feeding of Turkeys 122

Of Water-foul, and others.

OF the tame Duck 122
Of wild Ducks, and their ordering ib
Of Swans, and their feeding 123
Of Pea-Cocks and Pea-hens ib
Of the tame Pigeon, or rough-footed 124
Of nouriſhing and fatting Hearns, Puets, Guls, and Bitters 125
Of feeding Partridge, Pheſant, and Quail 126
Of Godwits, Knots, Gray Plover or Curlews ib
Of black Herns, Thruſhes, Felfares ib

Of Hawks.

OF Hawks in generall of all kinds 127
Of ſcowrings ib
Impoſtumes in Hawks 129
Of ſore eyes in Hawks ib
Of the Pantas ib
Of caſting the Gorge ib
Of all ſorts of Worms or Pilanders 130
Of all ſwelling in Hawks feet ib
Of the breaking of a Pounce ib
Of bones broke, or out of joint ib
Of all inward bruiſings 131
Of killing Lice ib
Of the Rie ib

The Table.

Of the Frounce 132
Of the Rheums ib
Of the Fornicas ib
Of the Fiſtula 133
Of the privy-evill ib
Of all ſorts of wounds 134
Of the Apoplexy, or falling evill ib
Of the purging of Hawks 135
Of a Hawk that cannot mute. ib
The aſſuredſt ſigns to know when a Hawk is ſick. 136
Of the Feavour in Hawks ib
Of helping a Hawk that cannot diſgeſt ib
Of the Gout in Hawks 137
Of the ſtanching of blood ib

Of Bees.

OF Bees in generall 138
Of the nature of Bees ib
Of the Bee-hive ib
Of the trimming of the hive. 139
Of the placing of hives ib
Of the caſting of Bees, and ordering the ſwarms ib
Of ſetting hives 140
Of the preſervation of weake ſtocks ib
An excellent ſecret concerning Bees 141

Of Fſhing.

A Platforme for Fiſh-ponds, 142
Of fiſhing in generall 143
Of the taking of all ſorts of Fiſh with Nets, or otherwiſe 144

The

The Diviſion of the Titles intreated of in theſe Books.

First, Of the *Horſe*, his Nature, Diſeaſes, and Cures; with the whole Art of riding, and ordering all ſorts of *Horſes*, from *fol.* 1. to 70.

2. Of the *Bull*, *Cow*, *Calfe*, or *Oxe*, their breeding, feeding, and curing, from *fol.* 70. to 83.

3. Of *Sheep*, their choice, uſe, ſhape, infirmities, and preſervation, from *fol* 83. to 96.

4. Of *Goats*, their nature, ſhape, ordering and curing, from *fol.* 96. to 100.

5. Of *Swine*, their choice, breeding, curing, and feeding, in either champian, or wood Countries, from *fol.* 100. to 107.

6. Of tame *Conies*, from *fol.* 109. to 111.

7. Of *Poultry*, their ordering, fatting, cramming, and curing all the diſeaſes to them incident, from *fol.* 111. to 128.

8. Of *Hawks*, either ſhort-winged, or long-winged; the generall cures for their diſeaſes and infirmities, from *fol.* 128. to 138.

9. Of *Bees*, their ordering, profit, and preſervation from *fol.* 138. to 142.

10. Of *Fiſhing*, and making *Fiſh-ponds*, from *fol.* 143. to the end.

FINIS.

Country Contentments.

OR, THE

HUSBANDMANS RECREATIONS

CONTAINING THE WHOLSOME Experience, in which any ought to Recreate himſelfe, after the toyle of more ſerious buſineſſe.

As namely, Hunting, Hawking, Courſing with Gray-Hounds, and the Laws of Leaſe, Shooting in the Long-bow or Croſs-bow, Bouling, Tennis, Baloon: The whole Art of Angling, and the uſe of the fighting Cock.

By *G. M.*

The Ninth Edition.

Newly Corrected, Enlarged, and adorned with many Excellent Additions, as may appear by this Mark ☞

LONDON,
Printed by *William Wilſon*, for *George Sawbridge*, at the Bible on Ludgate-hill, neer Fleet-bridge. 1660.

ob:: 1598.

To the thrice Noble and vertuous maintainer

and furtherer of all lawfull and worthy pleaſures,

Sir THEODORE NEWTON,

Knight.

SIR, Howſoever baniſhed by the neceſſity of mine affairs from your preſence, (in which I once built the beſt and happieſt eſtate of my Life, beginning to love it, becauſe I found you did imploy it,) yet can I never be ſeparated from your remembrance, becauſe it is all the joy which is likely to live and dye with me; witneſſe my ſoul, that ſhews me no worldly leſſon ſo much, as the beneficial favours I have reapt from your vertue; which to acknowledge with a more earneſt and ſerious fervency, I have ſent this poor Book to kiſſe your hand, and ſpeak to you in plain and ſhort Reſolves thoſe ſpeeches which you have been willing to hear from my mouth; not doubting but they will give you ſatisfaction, and make me live both with you, and the inheritours of your vertues, to the laſt age. They are true and eaſie, drawn from theſe laſt times, not borrowed to beſtow with a flattering inſinuation, but faithfully drawn from Art, and from thoſe experiments which I once thought ſhould have ſlept in the grave with me: but having lived ſo long from your eyes (which I proteſt my ſoul truly loves) I ſtudyed to think what gratefull Embaſſadour I might ſend to ſpeak I love you: I love you and finding none which I thought you would better hear than this, I furniſht him with the beſt inſtructions I could, and ſent him only attired in his own vertue, to tell you, what I do, and what I will do, is ever to live and dye at your ſervice

Gervaſe Markham.

To the best disposed Readers.

MAny and sundry may be the constructions and censures of this Book (Courteous and well disposed Reader) because I have in former time written so largely of some part of the subject contained herein; but I would have no man mistaken in his own prejudicate opinion, but truly understand, that this is neither Epitomy, relation extraction, nor repitition either of mine own, or any other Author whatsoever: but a plain form of doing things by a neerer and more easie and safer way then ever hath hitherto been discovered, drawn from the latest experiments in true art, and finding a neerer way to our ends by many degrees: for what before could not be done in divers years, here you shall see how to effect in few months; and what we bestowed months upon to seek, now we may find in few weeks. The reasons which induc'd me to this labour were these, first to give satisfaction to the friends and favourers of my former works, that when they hear men discourse of these passages to our delights, they may yet know, that the first was neither ill nor vain, but what now is derived from it; and that albeit we may be less curious, yet the curiosity is not altogether unprofitable, but both joyned together may make an absolute understanding. Then to give ease and a light burthen to the heavy and duller memory, whom the tediousnesse of a great work may discourage: and lastly, because my former labour is utterly out of Print, whereby the Kingdome is deprived of the benefit I intended, I thought good to have something living of lesse price, and as great (perhaps greater) profit, which should satisfie all vertuous minds in any thing required, within the compass of those former shewed Recreations: not doubting but howsoever men may first give a light survey to these papers, yet if they once take pains to read them, they will after affirm them worthy of choice bosomes. And with this setled resolution I leave them to thy view, and thee to thine own rest.

Ever one, Gervase Markham.

Country

COUNTRY CONTENTMENTS:

OR,

The Husbandmans, Recreation containing the wholeſome Exerciſes, in which any man ought to Recreate himſelf, after the toyle of more ſerious Buſineſſe.

The firſt Book.

CHAP. I.

Of Hunting, and of all the particular Knowledges belonging thereunto.

HAving already in my former work of the *Engliſh Huſbandman*, ſet forth in ſufficient largeneſs, the toyl, and induſtrious labours of the carefull *Huſbandman*, and how both his mind and body ought in every ſeaſon to be imploy'd for the effecting and bringing forth of thoſe wholſome profits, which God hath appoynted for the maintenance of him and his Family: And in the

the Book last going before called *Cheap and Good*, shew'd the cure and maintenance of his Cattle and creatures bred by him, & his labours, through Gods great Blessings; I think it not amiss here to speak of those lawfull and praise worthy exercises or recreations, in which (with Gods fear, & care of not offending his neighbour) he may soberly spend those hours which he shall bestow in the cheerfull reviving and stirring up of his spirits, being formerly wearied or fore-done with the heavy toyl of more unpleasant (though more profitable) studyes: both because it is intended that a man so good and vertuous as the true *Husbandman* is, should not be deprived of any comfort or felicity, which the earth, or the creatures of the earth can afford to him, being indeed the Right Lord and Master (next under God) of them both; as also for the necessity thereof, being the strengthner and inabler of the mind, to undergo the weightiest affairs that can any way poise, or bear down imagination.

The necessity and use of Recreation.

Hence it comes that the heathen Sages, or wise men of the first world, founded, with their Laws, their feasts; with their *Labours*, their *Olympicks*, with their warfare, their *Triumphs* nay at this day we see the severest pedants will give their Schollers their play day, and the most covetous masters will bind their hirelings but to certain hours; every toyl exacting (as out of duty) sometime for recreation: neither was there any *Stoick* found so cruel, either to himself or nature, but at sometime or other he would unbend his mind, and give it liberty to stray into some more pleasant walks, then the myry wayes of his own wilfull resolutions. As I have observed in the course of many men of exceeding strict lives, to whom albeit severity of profession, infirmity of body, and age, or such like, have taken away all actuall recreation, yet have their minds begot unto themselves some habits or customes of delight, which have in as large measure given them contentment, whether they were their own, or borrowed, as if they had been the sole Actors of the same.

But why wade I thus far in this untroubled stream? Let it suffice then that as Recreation is most necessary, so to noon it is more due then to the *Husbandman*, and herein you may not expect, that I will go about to elect and prescribe what recreation he shall use, binding all men to one pleasure; God forbid: my purpose

purpoſe is meerly contrary; for I know in mens recreations, that nature taketh to her ſelf an eſpecial prerogative, and what to one is moſt pleaſant, to another is moſt offenſive; ſome ſeeking to ſatisfie the mind, ſome the body, and ſome both, in a joynt motion.

I will therefore, as far as my skill and knowledge will extend, figure forth to the life every ſeverall recreation, leaving no limb or member imperfect, and then leave unto the choice of the *Huſbandman*, that which ſhall beſt agree with his ſpirit: not doubting but as they are in themſelves lawfull and modeſt; ſo he will uſe them according to the worthineſſe of his own, and their vertues. Now for as much as theſe ſports are many and divers, I think it not amiſs to begin and give that recreation precedency of place, which in mine opinion (how ever it may be eſteemed partial) doth many degrees go before, and precede all other, as being moſt royal for the ſtatelineſſe thereof, moſt artificial for the wiſdome and cunning thereof, and moſt manly and Warlike for the uſe and indurance thereof. And this I hold to be the Hunting of wild Beaſts in generall: of which as Chaſes are many, and ſo I will ſpeak of them particularly in their proper places. The praiſe of Hunting.

But before I proceed any further, I will tell you what *Hunting* is, and from the true definition thereof, make your way more eaſie and plain into the hidden Art of the ſame. Hunting is then a curious ſearch or conqueſt of one Beaſt over another, purſued by a natural inſtinct of enmity, and accompliſhed by the diverſities and diſtinction or ſmells onely, wherein *Nature* equally dividing her cuuning, giveth both to the offender, and offended, ſtrange knowledge both of offence and ſafety. In this recreation is to be ſeen the wonderfull power of God in his creatures, and how far rage and policy can prevail againſt innocency and wiſdome: But, to proceed to my main purpoſe you ſhall underſtand that as the Chaſes are many which we dayly hunt as that of the *Stagges* the *Buck* the *Roe*, the *Hare*, the *Fox*, the *Badger*, the *Otter*, the *Boar*, the *Goat*, and ſuch like; ſo the purſuers or conquerers of theſe chaſes (ſpeaking of *Hunting* only) are but one kind of creatures; namely, *Hounds*. Now of theſe hounds there are divers kinds, as the ſlow hound, which is a large What Hunting is. The diverſity of Chaſes. The diverſity of Hounds.

large great dog, tall, and heavy, and are bred for the moſt part in the Weſt Counties of this Land, as alſo in *Cheſhire* and *Lancaſhire* and moſt wood land and mountainous Countryes; then the middle ſiz'd dog, which is more fit for the Chaſe, being of a more nimble compoſure, and are bred in *Worceſterſhire*, *Bedfordſhire*, and many other well mixt ſoyls, where the Champain and covert are of equal largeneſs; then the light, nimble, ſwift, ſlender Dog, which is bred in the North parts of this Land, as *Yorkſhire*, *Cumberland*, *Northumberland*, and many other plain Champain Countryes: and laſtly, the little *Beagle*, which may be carried in a mans glove, and are bred in many Countryes for delight onely, being of curious ſents and paſſing cunning in their hunting; for the moſt part tyring, (but ſeldome killing) the prey, except at ſome ſtrange advantage.

Theſe hounds are of divers colours, and according to their colours, ſo we elect them for the chaſe: as thus for example. The white hound, or the white with black ſpots, or the white with ſome few liver ſpots, are the moſt principall, both to compoſe your Kennel of, and will indeed haunt any chaſe exceeding well, eſpecially the Hare, Stag, Buck, Roe, or Otter; for they will well endure both woods, and waters: yet if you demand which is the beſt, and moſt beautifull of all colours, for the generall Kennel, then I anſwer the white with the black ears, and a black ſpot at the ſetting on of the tayl, and are ever found both of good ſent, and good condition. The black hound, the black tann'd, or he that is all liver hewd, or the milk white, which is the true Talbots, are beſt for the ſtring, or line; for they do delight moſt in blood, and have a naturall inclination to hunt dry foot: and of theſe the largeſt is ever beſt, and moſt comely. The griſſeld, which are ever moſt commonly ſhag hair'd or any other colour, whether it be mixt, or unmixt, ſo it be ſhag-hair'd, are the beſt verminers, and therefore are choſen to hunt the Fox, Badger, or any other hot ſents: they are exceeding good and cunning finders: and therefore have Huntſmen thought not amiſſe to have one, or a couple in every Kennel.

The ſhape and proportion of Hounds.

For the ſhape of your Hound, it muſt be according to the climate where he is bred, and according to the natural compoſition

poſition of his body, as thus: If you would chooſe a large, heavy, ſlow, true, Talbot like hound, you muſt chooſe him which hath a round, big, thick head, with a ſhort noſe upriſing, and large open noſtrils, which ſhews that he is of a good and quick ſcent, his ears exceeding large, thin, and down hanging much lower then his chaps, and the flews of his upper lips almoſt two inches lower than his neither chaps, which ſhewes a merry deep mouth, and a loud ringer, his back ſtrong and ſtreight, yet rather riſing, then inwardly yielding, which ſhewes much toughneſſe and indurance; his fillets would be thick and great, which approves a quick gathering up of his legs without pain, his huckle bones round, and hidden, which ſhewes he will not tyre, his thighs round, and his hams ſtreight, which ſhewes ſwiftneſſe; his tail long, and ruſh grown, that is big at the ſetting on, and ſmall downward, which ſhewes a perfect ſtrong chine, and a good wind; the hair under his belly hard, and ſtiffe, which ſhews willingneſſe and ability to endure labour in all weathers, and in all places; his legs large, and lean, which ſhews nimbleneſſe in leaping or climing, his foot round, high knuckled and well clawd, with a dry hard ſoal, which ſhewes he will never ſubbait; and the general compoſure of his body ſo juſt, and even, that no level may diſtinguiſh whether his hinder or fore part be the higher; all which ſhew him of much ability, and that in his labour he will ſeldome find any annoyance. But if you will chooſe a ſwift light hound, then muſt his head be more ſlender, and his noſe more long, his ears and flewes more ſhallow, his back broad, his belly gaunt, his tail ſmall, his joints long, his foot round, and his generall compoſure much more ſlender, and Gray-hound-like: and thus in the generality for the moſt part, are all your *Yorkſhire* hounds, whoſe vertues I can praiſe no further than for ſcent and ſwiftneſſe: for to ſpeak of their mouths they have only a little ſharp ſweetneſſe like Gig, but no depth or ground like more ſolemn muſick.

Now to ſpeak of the compoſition of Kennels, though there is a moſt certain known better hood, yet it is to men like beauty each allowing beſt of that which agrees with his own affection, therefore when you intend to ſet up a Kennel of hounds, examine your fancy what be the beſt pleaſures you take in

The compoſition of kennels.

hounds, whether it be cunning in hunting, ſweetneſſe, loudneſſe or deepneſſe of cry; whether it be for the training of your horſe, or elſe but meerly for the exerciſe of your own body, being otherwiſe ſubject to groſſneſſe and infirmity: If it be for cunning hunting, you ſhall breed your dogs from the ſloweſt and largeſt of the Northern hounds, and the ſwifteſt and ſlendreſt of the Weſt country hounds, being both male and female, approved to be ſtaunch, fair, and even-running, or perfect fine ſcent, and not given to lye off, or looks for advantages. Theſe hounds will neither be ſo exceeding ſlow, that you will waſte many dayes without ſome fruit of your labour, or ſo unnimble, that you ſhall need men to help them over every hedge, as I have many times ſeen, to my much wonder; but having both ſtrength and nimbleneſſe, will hold you in continual delight and exerciſe; for theſe middle ſiz'd dogs are neither ſo ſwift that they will far out-run the ſcent, and ſo fetch many tedious rings to recover it; nor ſo ſlow, that for want of ſpeed they will loſe the ſcent, and let it grow cold by their own lazineſſe, but being ever and anon upon it, bring the Chaſe to ſuch a narrow exigent, that the poor beaſt ſhall be forc'd to try all the skill, nature or ſtrength hath lent it, to preſerve life: and the hounds on the other ſide, all their pains, and the huntſmans cunning, to undoe intricate doubles, skips, ſquats, and windings with which they ſhall be perplexed; and in this mediocrity of hunting, ſhall your eye (if the covert be not too extream thick) take a perfect view of all the art and cunning in every paſſage, ſo that I conclude the middle ſized hound, of good ſtrength, ſound mouth, and reaſonable ſpeed, which will make a horſe gallop faſt, and not run, is the beſt for the true Art and uſe of hunting.

The middle-siz'd dog for running.

If you would have your Kennel for ſweetneſſe of cry, then you muſt compound it of ſome large dogs, that have deep ſolemn mouthes, and are ſwift in ſpending, which muſt as it were bear the baſe in the conſort; then a double number of roaring, and loud ringing mouthes, which muſt bear the counter tenor; then ſome hollow plain ſweet mouthes, which muſt bear the mean or middle part: and ſo with theſe three parts of muſick you ſhall make your cry perfect: and herein you ſhall obſerve that theſe hounds thus mixt, doe run juſt and even together, and

For ſweetneſs of cry.

and not hang off looſe from one another, which is the vileſt ſight that may be; and you ſhall underſtand, that this compoſition is beſt to be made of the ſwifteſt and largeſt deep mouthed dog, the ſloweſt middle fiz'd dog, and the ſhorteſt legg'd ſlender dog, amongſt theſe you may caſt in a couple or two ſmall ſingle beagles, which as ſmall trebles may warble amongſt them: the cry will be a great deal the more ſweet.

If you would have your kennel for loudneſſe of mouth, you ſhall not then chooſe the hollow deep mouth, but the loud clanging mouth, which ſpendeth freely, and ſharply, and as it were redoubleth in the utterance: and if you mix with them the mouth that roareth, and the mouth that whineth, the cry will be both the louder and the ſmarter; and theſe hounds are for the moſt part of the middle ſize, neither extream tall, nor extream deep flewed, ſuch as for the moſt part your *Shropſhire*, pure *Worceſterſhire* dogs are, and the more equally you compound theſe mouths, having as many Roarers as Spenders, and as many whiners, as of either of the other, the lowder and pleaſanter your cry will be, eſpecially if it be in ſounding tall woods, or under the eccho of Rocks. For loudneſs of cry.

If you would have your Kennel for depth of mouth, then you ſhall compound it of the largeſt dogs which have the greateſt mouths, and deepeſt flews, ſuch as your *Weſt Country*, *Cheſhire*, and *Lancaſhire* dogs are, and to five or ſix baſe couple of mouths, ſhall not adde above two couple of Counter tenors, as many Means, and not above one couple of Roarers, which being heard but now and then, as at the opening or hitting of a ſent, will give much ſweetneſſe to the ſolemneſſe, and graveneſſe of the cry, and the muſick thereof will be much more delightfull to the ears of every beholder. For deepneſs of cry.

If you would have your Kennell for the training of your horſe onely, labouring thereby to bring him to the full perfection of ſpeed, truth, and toughneſſe, then you ſhall compound your Kennell of the lighteſt, nimbleſt, and ſwifteſt dogs, ſuch as for the moſt part all your Northern hounds are, which running ſwiftly away with the chaſe, will draw your horſe up to that extraordinary ſpeed, that he will forget all eaſe or loitering, and acquaint himſelfe dayly with the violence of ſuch exerciſe, being ſo For training horſes.

familiar therewith; that in the end it will be leſſe troubleſome to him then a ſlow gallop: and hence it was and is, that the North parts are ſo famous for the truth and ſwiftneſſe of their horſes, above all other Countries in this Kingdome: for it is moſt certain that their horſes are not better bred there, then in other places, but their exerciſe is much ſtronger, and violent through the naturall ſwiftneſſe of their hounds, inſomuch, that unleſſe a horſe either out of nature, or education, be brought to a more then ordinary ſpeed, it is impoſſible that his maſter ſhould either ſee ſport, or keep company with his companions.

A good caveat for Gentlemen.

Therefore I would have all young Gentlemen, which are addicted to the delight of hunting, or running horſes, by all means to train them up after the ſwifteſt hounds: for it is the greateſt deceit and couſenage a man can beſtow upon himſelfe, to do the contrary, as I have ſeen many times in mine own experience, when a Gentleman who hath ſuppoſed his hounds to be ſwift, which indeed were but of a middle ſpeed, and hath ſeen his Horſe follow them all day luſtily and ſtrongly, in every Chaſe able to command the formoſt hound at his pleaſure, he hath immediately in his own judgement concluded his horſe ſwift and matchable with the beſt, and from that opinion ingaged him againſt a known ſwift horſe, for great ſummes of money: then when the day of tryall, hath been come, the horſe which had been trained after ſlow dogs, comming to follow thoſe that were indeed ſwift, hath been drawn ſo far beyond the uſual manner of former exerciſe, that he hath given over the Chaſe before the day hath been half ſpent.

This caveat I give for all mens inſtructions, becauſe I have ſeen the loſſe which hath grown thereby. And now to return to my purpoſe; your Kennel thus compoſed of the ſwifteſt hounds, you ſhall as nigh as you can, ſort their mouths into three equal parts of muſick, that is to ſay, Baſe, Counter-tenor, and Mean; the Baſe are thoſe mouths which are moſt deep and ſolemn, and are ſpent out plain and freely, without redoubling: the Counter-tenour are thoſe which are moſt loud and ringing, whoſe ſharp ſounds paſſe ſo ſwift, that they ſeem to doole and make diviſion; and the Mean are thoſe which are ſoft ſweet mouthes, that though plain, and a little hollow, yet are ſpent ſmooth

ſmooth and freely; yet ſo diſtinctly, that a man may count the notes as they open. Of theſe three ſorts of mouths if your Kennel be (as near as you can) equally compounded, you ſhall find it moſt perfect & delectable: for though they have not the thunder and loudneſſe of the great dogs, which may be compared to the high wind-inſtruments, yet they will have the tunable ſweetneſs of the beſt compounded conſorts; and ſure a man may find as much Art and delight in a Lute, as in an Organ. But here me thinks, a too tender lover of a horſe ſtands at my elbow, and puls me by the ear with this Objection, that to train horſes after dogs of this exceeding ſwiftneſſe, will be a labour of that violence, which a young horſe will hardly endure: For firſt it will draw him ſo ſuddenly from his wind, that it will breed ſtopping in his body, and choaking up the paſſage of his breath, hazard the breaking of his Lungs, or the rimme of his belly, as hath been many times ſeen in horſes of great metal: Next, the horſe being young and unacquainted with exerciſe, it will breed in him a wearineſſe and loathing of his labour, and nothing is well done that it is not done with delighe: Laſtly, the horſe being foul of body, and unpurged, it may melt his greaſe too ſoon, ſtrain his ſinews and tender griſtles too much, and breed many diſeaſes, foul, and incurable, of which only too violent Labour is the ground-work. Objections againſt ſwift hounds.

To this objection I thus anſwer, that albeit the labour be for the time moſt violent, yet it is not of ſo long continuance as that which is more ſlow and to run twelve ſcore ſwiftly, is not ſo painful, as to walk twenty miles. for you muſt underſtand that theſe ſwift hounds out of their metal and ſwiftneſſe do ſoon overſhoot and runne beyond the ſcent, and then retiring back upon it again, give the horſe time to eaſe himſelfe, and catch new breath; whereas the ſlower dogs carrying the ſcent ever before them, keep your horſe to a continual labour, which is more painful, and makes him a tough enduring Hackey, but not a moſt ſwift running Gentleman: beſides, the many faults and caſtings about of the ſwift dogs, add ſuch a comfort unto the horſe, who perceiveth the ſtrength of his labour to have no eaſe till he come up to thoſe Faults, that he will out of the willingneſſe of his own nature, double his courage to purſue the moſt The anſwer.

ſwift, ſeeing his eaſe is ever the greater, by how much he keepeth ever nearer to the hounds. For the danger of burſting, melting his greaſe, and other infirmities, the diſcretion of the Rider, and skill of the Keeper, muſt prevent, of whoſe Offices I have written largely in former Chapters in the Book called *Cheap* and *Good*: for be aſſured, thoſe dangers may happen as well after the ſloweſt dogs, as the ſwifteſt.

Correction of ſwift hounds haſte.

But to my purpoſe, ſince hounds are the ſubject of my diſcourſe: You ſhall underſtand that theſe ſwift hounds are, as is before ſaid, out of their haſte, nimbleneſs, and metall, more ſubject to make defaults then other hounds, yet full as curious and good of ſcent as any other, as you ſhall perceive by the quick knowledge and apprehenſion of their own errors, caſting about of themſelves, and recovering the ſcent, and ſo going away with the ſame, before any huntſman can come in to help them: yet I would wiſh every Gentleman-like husband-man, in the compoſition of this Kennel, to have ſome ſtaunch old dogs amongſt them, which running more ſoberly, yet cloſe with them, may ſit upon the ſcent, when they overſhoot it; and ſo call them back, and give them their loſſe without more trouble. Alſo I would have both in this Kennell, and every other, a couple at leaſt of good finders, being dogs ſtaunch of mouth, and not able to open, except they lie upon a certain trayle; for theſe will be great furtherers of your ſport, and make your younger dogs a great deal more mute and painful.

Of the High-way hounds.

You ſhal alſo in this, and all other Kennels, have at leaſt a couple of good high way dogs, that is to ſay, hounds of ſuch cunning and perfect ſcent, that they will hunt as well upon a dry, hard, high-way (where you cannot pick forth the paſſage of your Chaſe) as upon the freſheſt mould, or will hunt as truly through flocks of ſheep, or heards of beaſts, as upon the grounds where few or no beaſts come, theſe are called hounds for the high way, or guides of the Kennel, and are exceeding neceſſary, and fit for all mens pleaſure: for they take from the huntſman, both ſence of pain, and anger.

The kennell for exerciſe of body.

Laſtly, if you would compoſe a Kennel only for the exerciſe of your own body, or maintenance of health, you ſhall firſt draw into conſideration your own ability, as whether you

you will make your exerciſe on foot, or horſe back. If your delight and ability draw you to hunt on foot, then I would wiſh you to compoſe your Kennel of the biggeſt and ſloweſt dogs you can get, reſpecting only cunning hunting, and depth of mouth; and this Kennel you make ſo ſtaunch and obedient to your command, that when they are upon the hotteſt ſcent, or in the earneſtneſſe of the chaſe, to ſtep before them, and caſt your hunting pole but before their eyes, they ſhall ſuddenly ſtop, and hunt after you in full cry; with no more ſpeed then it ſhall pleaſe you to lead them; and then when you pleaſe, to let them goe before you again, to paſſe away with the ſcent roundly, and without ſtay.

This manner of hunting will carry with it a twofold delight, the one of enjoying the muſick of their voices, the other the cunning of their noſes: each ſtriving to go before, yet none preſuming without leave to go before: by this rule you ſhall bring the hotteſt ſcent, and the coldeſt ſcent to one manner of ſwiftneſſe, and ſo neither offend your body with too much nor too little exerciſe. But if you will take your exerciſe on horſe-back, becauſe infirmity will not let you run afoot, then you ſhall compoſe your Kennel of the ſloweſt, or middle ſized hounds, who ſhall have both good mouths, and loud, and noſes of moſt ready ſcent, and perfect hunting: and if you bring theſe hounds alſo to the former obedience of ſtopping and hunting after you, it will be exceeding good and delightful, both to your eyes, and ears, and ſo bring your hounds to temperance and coolneſſe in hunting, that taking the frenſie and greedineſſe of haſte from their minds, they will make your ſport much longer, and leſſe weary, then elſe it would be.

But ſome will anſwer me, that albeit they have infirmities, which detaine them from running afoot, or labouring like lackies or drudges, yet they can endure ordinary and orderly walking, ſuch as ſhall be fit for any moderate exerciſe; and therefore would hunt on foot: yet the great hound they like not for two cauſes: firſt his chargeable and troubleſome keeping, and next his noiſomneſſe and peſtering company in a houſe that is but ſtreight, and of no more then of neceſſary uſe. To theſe I anſwer, that it is good for them to keep the little ſmal Mitten-Beagle, which

which may be companion for a Ladies Kirtle, and in the field will hunt as cunningly as any hound whatſoever only their muſick is very ſmall, like reeds, and their pace like their body; only for exerciſe, and not for ſlaughter.

Of the hounds Kennel.

Having thus compoſed your Kennel of hounds according to the humour of your own fancy and delight, it ſhall be meet then that you frame a Kennel or houſe to keep them in, wherein they may lie dry, and have their food and other neceſſaries about them, without troubling your dwelling houſe, or giving offence by their greedineſſe and ravening.

The ſituation of the Kennel.

This Kennel for hounds, would be placed a pretty diſtance from your dwelling houſe, near ſome river, pond, ſpring, or other freſh water: it would alſo ſtand againſt the ſide of ſome bank or hill, which looking directly againſt the Eaſt, the morning Sun might riſe upon the ſame, and not loſe the ſight of it till at leaſt two or three hours after noon, which will be a great refreſhing and comfort unto the hounds, which love naturally to ſtretch them, and pick themſelves in the Sun: againſt the ſide of this hill, would be cut or digged, divers large and broad ſeats one above another, containing at leaſt five foot in breadth, and two foot and a halfe in height, which ſeats would be either boarded, or watled with ſtakes and ſmall wands on the ſides, to hold up the earth from falling, and alſo cloſe boarded a loft; whereon you ſhall lay freſh and ſweet ſtraw for your dogs to lye upon: the number of theſe ſeats would be according to the number of your hounds, and the quality of the earth in largeneſſe: over theſe ſeats would be made a cloſe and well tiled ſhed, open no way but upon the Eaſt, and in ſuch manner that it may defend either all or moſt part of the ſeats from rain, wind or any tempeſt: from the loweſt part of theſe ſeats forward, you ſhall make a large green court, being either walled, paled, or otherwiſe very ſtrongly fenced about, in which your hounds may play, ſport, ſcummer, and do other offices of nature fit for their health: alſo in this court, in the moſt convenient corner of the ſame, you ſhall build a little houſe or lodge, with a ſpacious and large chimney in the ſame, wherein in the winter time you ſhall allow fire, before which your dogs returned (from hunting) may ſtretch, pick, dry and trim themſelves, which is an exceeding

ing comfort unto them, and wil make them more ſtrong and able to endure their Labour, and alſo keep them wonderfully wel both from the mangy and other filthy diſeaſes which proceed from colds taken after violent heating. In this Chiminy your Huntſman ſhal have a large Cauldron, and other neceſſaries, as Ladles, Skummers, and ſuch like; for preparing and making ready of all ſuch warm meat as you ſhall allow to them, which if it be ſweet is called Mange; if otherwiſe, Carrion, or Garbage: above this lower Room ſhall be your Huntſmans Lodging, wherein he ſhall alſo keep his couples, Liams, Collars, Traſhes, Boxes and pots with ſalves and oyntments, for the cure of ſuch infirmities as ſhall happen amongſt them, and all other neceſſaries any way belonging to his office. In an other part of the court, and neereſt unto the houſe, you ſhall place troughs and tubs, ſome for their meat, and ſome for ſweet Water: all which muſt be kept very neat and clean; and Water muſt by no means at any time be wanting, yet oft renewed, and the veſſels ſcowred for ſweetneſſe ſake for the Huntſman ought to hold it for a Rule, that nothing bringeth more health than cleanneſſe. Into this kennel you ſhall by no meanes bring at any time Carrion, becauſe it wil make the place unſavory, and unfit for any man of worth to look into, and ſure it ought to be a place fit for every worthy Eye.

Now your Kennel being thus orderly, and wel prepared, it is meet that I ſhew what meat is meeteſt for hounds; how it ſhall be prepared, and how they ſhall be fed. Firſt then, intending that I only ſpeak of hunting hounds, that is to ſay, hounds which are in continual uſe & action, you ſhal underſtand that in their dayes of reſt, the ſtrongeſt and luſtieſt meat you can give them both for raiſing them up when they are low hunted, or for keeping them in ſtrength when they have luſt within them, is either horſe fleſh newly ſlain and warm at the feeding, the intrals and garbage of Beaſts (Lungs only excepted) or the heads, plucks, and bowels of ſheep, or generally any Carrion which is not old, nor cold after the death. To feed them for perfectneſſe of hunting, and to keep their ſents fine, pure and clean, or to purge the ſtench of the carrion out of their noſes, that thereby they may undergoe the work with more cunning, the beſt food is to give them Mange, Of Hounds.

Mange, made either of ground Oats, Barley Meale, Branne, or Mill-duſt, well ſcalded and boyled together, or any of theſe two mixt together and ſcalded with beef broath, or any other broath in which fleſh hath been ſodden, ſo as it be not too extream ſalt.

Now for the uſe and manner of feeding with theſe meats (as I ſaid before) horſe-fleſh, garbage, and other carrion is only to breed ſtrength, and luſt in a hound, and is to be given only when a hound reſteth; becauſe the ſtrength and ſmel of the ſame will ſo cloy and ſtop the hounds noſtrils, that he can hardly diſtinguiſh, or undertake any finer ſent, and ſo breed much hindrance to his hunting: Therefore you ought ever to feed your hounds at leaſt the day before you hunt, if not more, with ſweet meat.

Now for the manner of feeding with horſe fleſh, or any other carrion, you ſhall be ſure to have it a good diſtance from your Kennel, and ſo as it may be no annoyance either to your own neighbours, or travellers in the high Way; then firſt before your Hounds touch it, with your Knife take of the skin, then open the body, take out the bowels and rip them; then, if the body be more then either your hounds can, or muſt eat, take off a leg, or a ſhoulder; or ſuch part as you think fitteſt to preſerve, and lay it by; then let your hounds feed on the reſt, till their bodies be well filled: which done, draw your hounds home and upon ſome ſtange for the purpoſe, carry with you that which you ſaved; which as ſoon as you have ſhut up your hounds, you ſhall bear to the River, or freſh Water, and lay it in the ſame until you have occaſion to uſe it; for it will keep it ſweet a week or more at leaſt, if need require.

Now for feeding with Mange, or ſweet meat, it would ever be done the day before you hunt, and as it is to be prepared in the Kennel, ſo you ſhall let them eat it in troughs, within the Kennel, for that will make them take delight in the place; and this Mange muſt ever be given warm, and made ſomewhat thick, and if you white it over with milke, or butter milk, and if you caſt into it chippings, cruſt of bread, bones, broken meat, or ſcraping of trenchers, it will be better, and they will eat it with more greedineſs.

If

If you have hounds that are poor, weak, or ſickly, which you would ſuddenly recover and bring unto hunting: Then if you take ſheeps heads, wool and all, and hack, hew, and bruiſe them in many pieces; then boyl them with Oatmeal, and Penny-royal and make ſtrong pottage of the ſame, and give all together warm to your ſick hounds, and it will ſuddenly recover them; if once in a week alſo you give them a full meal of warm horſe fleſh, it is very ſoveraign. Meat for ſick and weak hounds.

Now for the beſt times of feeding, it is held amongſt all our beſt experienc't Huntſmen, to be in the dayes of reſt, early in the morning before Sun riſe, and in the Evening at Sunne ſet: But in the dayes of hunting, you ſhall let them go faſting out of the Kennel & feed them as ſoon as you come home to the Kennel or before in your way homeward, if you have any horſe fleſh, or other Carrion readily provided: otherwiſe with ſuch meat as you have, ſo it will fill their bellies; for a hound by no means would be pinched of his belly after his labour, and therefore be ſure if your meat be coorſe to fill his guts well; if it be ſweet, ſtrong and comfortable, then leſſe will ſerve him. Beſt hours of feeding.

And here I think it meet to ſpeak of a convenient proportion of food, for the maintenance of a Kennel of good hounds: Where in you ſhall underſtand that three buſhels of Oats, or Barley-meal, with half ſo much Branne or Mil duſt, is a fit weekly proportion to keep nine or ten couple of hounds; with a little help of horſe fleſh, if the huntſman be any good husband, and painful as he ought to be in finding out horſes, ſcraps, cruſts and bones, which almoſt abound in every mans houſe of any worth or reckoning & by imploying that which is ſaved in the dales of labour to increaſe the proportion when need ſhal require: Many much larger quantities I have known, and do know allowed this day in divers places; but I have held it an abuſe to the Maſter, & either a covetouſneſs or negligence in the huntſman, by whoſe unskilful greedineſs, I have ſeen many tyred out of their pleaſures. Therefore be aſſured this quantity already named, will fully ſuffice, nay, even to pleaſe a moſt wonton curioſity; and ſurely much leſs, if a painfull Huntſman have the government: for I ſhall never ſee fairer or better kept hounds, then I have ſeen mainted with half this proportion; but as I would not be too A proportion of meat.

lavish in my directions, so I would much less be too strait handled, hoping that every man of honesty and trust will order his affairs with discretion.

Ordering of Hounds after hunting.

Now for the ordering of your hounds after they have done hunting, you shall, if you feed them abroad or otherwise, as soon as you bring them into the Kennel, wash all their feet either with a little warm butter and bees, beef broth, or water, wherein Mallows and Nettles have been boyled soft and tender, you shall pick every cley, and search the foot for thorns, stubs, or any other pricklings; you shall look that the straw whereon they lye, be sweet and frish; and if it be in the strength of Winter after they are fed, you shall suffer them for an hour or two to beak and stretch themselves before the fire, ere they go to lye down for all night, and by no means trouble them as long as they licke, pick, or trim themselves; but that once finished, you shall force them from the fire, and make them find out their Lodgings.

CHAP. II.

The curing of all manner of infirmities in Hounds.

NExt unto these precepts, it is meet you be skilfull in curing of all the diseases in hounds, of which as there be many so here you shall partake many rules for the same, both perfect, and excellently approved by late experience. And first of all, in as much as it is an infirmity of all other most general, natural, and as it were not to be divided from Dogs I will begin with the killing of fleas and lice, and such like vermine in hounds which proceeds from filthy keeping, rotten and moist lodging, and want of shifting of straw when it growes short by much lying on: if then your hound be troubled with fleas or lice, you shall take Rue or hearb of Grace four or five handfuls, and boyl it in a gallon of running water till a pottle be full consumed, then strain it through a coorse cloath, and put to it two ounces of strong *Stavesaker* beaten to powder, and being warm, bath your hound therewith and it will destroy them.

Of killing fleas and lice.

To kill worms

If your hound be troubled with worms; which is very generall amongst them, especially the young hounds, then you shall take a pint of new milk and mixe it with a good quantity

tity of Brimſtone, and ſo give it luke-warm unto the hound, and it will not only ſcowr away all manner of wormes, but all other filthineſs bred in the body of a hound, either by labour or ſurfeit.

If your Dogge have been bitten by either Snake, Adder, or any other venemous thing, take the hearb Calamint, and beat it in a morter, with Turpentine and yellow waxe, till it come to a ſalve, and then apply it to the ſore and it will heal it: Alſo if you boyl the hearb in milk, and give the dog it to drink, it will expel all inward poyſon. Biting with venemous beaſts.

If your hound have been bitten with another mad Dogge, which is a diſeaſe exceeding dangerous and mortall, you ſhall preſently waſh the place ſo bitten with Sea water or a very ſtrong brine, and it will ſave and cure him; or elſe take the hearb called Yarrow, and beat a handfull thereof in a morter, with a handful of wheat till it come to a ſalue, and then lay it to the ſore, and it will heal it: and if you pour into his ſtomack as much Mithridate as a hazel nut, diſſolved in ſweet wine, it will wonderfully ſcour and preſerve him from the infection of the inward poyſon. Biting with a Mad dog.

The infirmity of madneſs it ſelf in Doggs, is common and oft to be ſeen, and though it be altogether incurable, yet if a man be experienced in the firſt ſigns or characters of madneſs, he may prevent divers miſchiefs, and moſt mortal evils, which enſue for want of ſuch knowledge, and albeit he loſe one Dogge, yet he may ſave all the reſt: the firſt ſign therefore to know when a Dogge is entring into this diſeaſe, is a melancholy ſeparating himſelf from other Doggs, and walking up and down alone, oft caſting up his head into the wind, and looking upward, his tayle at the ſetting on, riſing upward, and the reſt hanging down, his month will foam and be full of ſlaver or white froth, as he runneth up and down he will haſtily ſnatch at every thing that he meeteth with, yet, but only give one ſnatch and away, his eyes will be red and more fiery then other Dogs, and his breath will be ſtrong and of a filthy ſavour: any of theſe ſigns when you ſhall perceive, you ſhall preſently ſeparate him from other Doggs and kill him, for unto the diſeaſe is no cure. Of a mad dog and the ſigns.

If your hound be gauld, or his skinne torn in any part, you ſhall Of Gauling.

ſhall only take *May* butter, yellow Waxe, and a little unſlackt Lime beaten together like a ſalve, and therewith anoint the ſore place, and it is a preſent cure.

Of a Tetter. If your hound (as they are much incident thereunto) have any tetter or dry ſcab, you ſhall take of black ink, the juyce of mints and vinegar of each alike quantity, and mix them together with the powder of Brimſtone till it be thick like a ſalve, and then annoint the tetter therewith till it bleed, and it will ſoon kill and cure it.

For the Itch. If your hound be troubled with the itch, you ſhall take Nerve-oyl, and beat it with quick-ſilver till the quickſilver be kil'd, and the ſalve turned to a pale yellow colour, then with the ſame annoint the Dog before a good fire, and chaſe it well againſt the hair and it will cure him.

Of the mangy or ſcab. But, if your hound be troubled with the ſcab or mangy, then you ſhall take a penny-worth or two of the beſt gun-powder you can buy, and mixing it with very ſtrong wine vinegar, make it thick like puddle, then with the ſame annoint all the places where he ſcratcheth till they bleed, and it will kill the mangy; there be others which do uſe to caſt their Doggs into the Lime-pits of Tanners, or Glovers, and force them to ſwim up and down the ſame, and it will kill the mangy; yet there muſt be a great care taken in putting the Dogs in, leſt doing it raſhly, the Lime water get into their eyes, which is very dangerous, and will hazzard their burning out.

Of Wounds. If your hound ſhall receive any wound, whether it be with ſharp or blunt weapon, or any accident whatſoever, although his own tongue be a ſoveraign ſalve, yet if it be in any part, where either he can or will not lick it, the beſt cure is to waſh it with warm butter and vinegar mixt together, and then anoint it with a little Venice Turpentine; but if it be a hollow wound, and muſt of force be tented, then you ſhall either tent it with ſweet butter and oatmeale, wrought together to a ſalve, or with yellow Wax and Deer-ſuet; there be ſome that will uſe for a tent a ſmall candles end, & it is very good if the tallow be ſweet, but if it be putrified then it will poyſon and corrupt the wound.

Of a Canker in the Ear. If your hound be troubled with a canker in his ears, which is a grief much incident unto them; you ſhall firſt rent the hole if

if you find any, with dry cork, and after waſh the ſore with vineger and allome, mixt together, till the fleſh look raw, and after dry it with burnt Allom only.

If your hound be ſurbaited, you ſhall waſh his feet with butter and beer boyled together, and then bind to the ſoles of his feet young red nettles, chopt very ſmall, or beaten in a morter till they come to a ſalve. Of ſurbaiting.

For any manner of bruiſe which ſhall happen to your hound, either by ruſh, ſpurn, ſtroke or otherwiſe, if it appear and ſwell outwardly, you ſhall bath the place, with chick-weed, and groundſal, boiled in ſtrong Ale dregs till they be ſoft, and it will allay the ſwelling: but if the bruiſe be inward, then you ſhall with a horn give the Dog a pint of new milk, and a quarter of an ounce of *Sperma cæti* well mixt together, or for want of *Sperma cæti*, double ſo much *Stone-pitch* beaten to fine powder. Of Bruiſe.

If your hound be troubled with the ſtone, or other filthy matter, which maketh him that he cannot piſs, you ſhall take the ſeeds of the herb *Granum ſolis*, or *Gromel*, and bruiſing them give them to the hound in half a pint of white wine. For the ſtone.

If your hound (as it is natural to Dogges) be ſo coſtive that he can by no means skummer, you ſhall firſt take a piece of a tallow candle, about three fingers in length, and thruſt it a good way into the tuel of the hound, and then hold down his tayle hard a quarter of an hour or more, and then give it liberty, and when he hath emptied his belly, you ſhall give him to drink five or ſixe ſpoonfulls of Sallet oyle, and it will cleanſe him ſufficiently. For coſtiveneſs.

If your hound be troubled with any diſeaſe in his ears, whether it be a continual running, or any other impoſtumation, you ſhall take verjuyce and chervile water, and mixe them together, and each morning and evening drop a ſpoonfull or two thereof into the Dogges ears, and you ſhall find it a preſent Remedy. For any diſeaſe in the Ear.

If your Dog at any time be troubled with ſore eyes, of what Nature or Quality ſoever the grief be: you ſhall take a leafe or two of ground Ivy, and chewing it well in your mouth, and ſucking out the juyce, ſpit the ſame into the Doggs eyes morning and evening, and it will cure them. This ground Ivy is a little round rough jaggy leaf, and grows in the bottome of hedges. For ſore Eye

If

If your hound ſhall happen to break a legge or any other bone, you ſhall firſt with your hand place it in his true place, and ſee that it ſtand ſtreight and eeven, then bath it in the warm oyl of ſwallows, or the oyl of *Mandrake* apples, and wrappe it about two or three times, in a ſear-cloath made of yellow waxe and Deers ſuet; which done, ſplent it with flat ſplents of wood, and ſo role it with a ſtrong roler, and let it ſo reſt nine dayes at leaſt, before you unſplent it; but remove not the ſeare-cloath for fifteen dayes, and you ſhall ſee the bone will knit ſtrongly and firmly.

CHAP. III.

Of the breeding of all manner of hounds.

HAving thus paſſed over the election of hounds, compoſition of Kennels, dieting, and curing of all ſorts of diſeaſes; I hold it meeteſt now to follow with ſome ſhort precepts the breeding of Hounds, becauſe it is exceeding hard, for any man to have a Kennel of hounds from gift or purchaſe without much imperfection: for though one friend give you a good hound, another ſels you a good hound, yet how their goodneſſes wil agree when they run together, is very diſputable: and truly unleſs your hounds have one ſpeed, one tuneableneſs of voyce, and one manner of hunting, your paſtime will be much diſorderly; which there is no way to get ſo eaſily and truly, as by the breeding of your hounds for one and the ſame birth produceth one and the ſame qualities: therefore having a hound and a bratch of that ſize, voyce, ſpeed, ſent, proportion, and general goodneſs which agreeth beſt with your own nature and condition, you ſhall put them together to ingender and breed, either in *January*, *February*, or *March*, according as they ſhall grow proud, for thoſe are the three moſt principal months in the year, for hounds, bitches or bratches, to be limed in: not but that they may conceive and bring forth as good Whelps in other months; but becauſe there will be much loſſe of time in the entring of them: for if a bratch be limed in *January*, ſhe will whelp her Litter in *March*, and ſo they wil be ready to enter in the firſt beginning of hunting-time: if ſhe be Limed in *February*, ſhe will whelp in *April*, and if ſhe be Limed in *March*

Hounds muſt uſe one another.

The months to breed in.

March, ſhe will whelp in *May* following: and in all theſe three Moneths there is not a dayes loſſe, for the entring of the whelps; which is an eſpecial care to be obſerved of Hunt-ſmen.

Alſo if you ſhall let your hounds ingender in the three moneths aforeſaid, you ſhall not forget to obſerve as near as you can, that when you put the Dog and Bitch firſt together, the Moon be either in the ſigne *Aquarius* or *Gemini*; for it is held amongſt the beſt Hunt-ſmen of this Land, that the whelps which are ingendred under thoſe two ſigns, will never run mad; and for the moſt part, the Litter will have at leaſt double ſo many Dog-whelps, as Bitch Whelps. When your Bitch is near whelping, or hath whelped, you ſhall ſeparate her from other hounds, and have a private kennel for her; where ſhe may be alone without company of other hounds; and you ſhall duely every night ſee her kenneld in the ſame; that ſhe may take acquaintance and delight therein; and when you feed her particularly, you ſhall feed her in that kennel, that taking a love thereto ſhe may not ſeek out other unfit and unwholeſome places to whelp in: for where a bitch firſt whelpeth her Litter, if they be removed, ſhe will not leave carrying her Whelps up and down, till ſhe have found the ſame place again; or ſome other perhaps more unfit then the former, and ſuch carriage of Whelps by the Dam is very ill and dangerous: this kennel where your Whelps ſhall remain, ſhall not be kept cloſe, but open, that the bitch may have liberty to go up and down after twenty four hours ſpace; which time ſhe ſhall be kept very well, cloſe and warm, that ſhe may perform the natural office of a Dam to her whelps.

Under which ſigns to breed.

Ordering of Bitches after whelping.

You ſhall not ſuffer your Whelps to ſuck above two moneths at the moſt, but then you ſhall Wean them, and if the houſe you keep be of great receit and many ſervants, you ſhall let your Cook bring up your beſt Whelps, and your Dairy-maid your ſecond beſt, and the reſt you ſhall put forth amongſt your friends, or Tenants, according unto the love you poſſeſſe in the Country.

When to wean whelps.

Now when your Whelps are brought up, you ſhall not enter them into hunting before they be at leaſt a year and half old, as

When to enter whelps.

thus, if your Whelps were whelpt in *March*, then you ſhall not enter them untill *September* come twelve moneths after: and if they were whelpt in *April*, then you ſhall enter them in *October* come twelve moneths after. And ſo forth, for the reſt of the moneths.

How to enter Whelps.

Now for the manner of your entring of Whelps, you ſhall draw them abroad in the pleaſanteſt of the day, with the moſt ſtaunch and beſt hunting hounds you have, leaving at home all babling and flying Curs; and if you can, you ſhall have your Hare ready ſet before you come, (for the Hare is the principal chaſe you can enter Whelps upon) and then putting her from her form, and viewing perfectly which way ſhe taketh, after the ſent is a little cooled, lay on your hounds, and give them all the advantages you can for the hunting of her, as by wind, view, hollow, or pricking her paſſage: and if they ſhall chance to kill her; you ſhall immediately take her from the hounds, and not ſuffer them to break her, for it is an evil cuſtome, but your ſelf ſtripping away the skin, ſhall cut her all to pieces, and give every part of her to your young Whelps, which will breed in them great courage and delight in hunting.

Obſervations in the entring of Whelps.

You ſhall obſerve, in the entring of your young whelps, that they hunt fair and even, without advantage, or ſeeking any way to gain eaſe, as by lying off from the ſent, thwarting or croſſing when they are behind to get even with the formoſt hounds: any of which when you ſhall perceive, you ſhall immediatly beat them in with your hunting pole, and compell them to take the ſent before them: alſo if any of them be giddy headed and out of mettle will run before the other hounds clean from the ſent, in this caſe alſo you ſhall beat them ſoundly back, and bring them back to the ſent, and force them to take it with the reſt of the Kennel. Alſo if any young hound will not ſtrike upon a default, but run babling away without the ſent, drawing away the reſt of the Kennel to follow him; in this caſe alſo you ſhall ſcourge him back, and compel him to ſtand and labour upon the default, till ſome of the elder hounds undertake it, then you ſhall cheriſh all both with horn and voyce into the Chaſe.

Laſtly, if you find that any of your young Whelps truſt more

to

to his own ſent than to the reſt of his fellows, and ſo by that meanes hunteth at leaſt twenty foot ſometimes behind the reſt, making his defaults by his own noſe, and not their own leading, yet hunteth very juſt and true: In this caſe you ſhall by no means over-goe, or over-ride the Whelp, but give him all comfort and encouragement you can, and let him take his own time and leiſure, for uſe and experience will quickly make him skilful, and the skill will ſoon carry him up, among his fellows where hee will ſoon become a principall Leader: and thus much for Hounds, and the compoſition of kennels.

CHAP. 4.

Of all the ſeveral Chaſes which Hound are t› hunt.

THere hath already (by many well experienced men) been ſo much written of this Subject, that I know not well what to write, except I ſhould in ſome ſort repeat another mans tale: from which I am ſo far different (having vowed to my ſelf, by no means to meddle with any thing formerly written) that the ſtricteſt examiner whoſoever, ſhall not find me guilty of the leaſt blemiſh therein: yet ſince I muſt neceſſarily in this caſe write ſomething, I will as briefly as I can ſet downe ſome materiall and ſpeciall notes, and for the main ſubſtance if they deſire a long continued circumſtance (though this is ſufficient for any underſtanding wit) referre them unto old *Triſtram's* book, tranſlated by Mr. *Turbervile*, and ſuch other Books, where they may find compleat ſatisfaction.

The hunting of the Stag.

To ſpeak then firſt of the Stagge, which is the moſt Princely and royall Chaſe of all Chaſes, and for whom indeed this Art of Hunting was firſt found out, and invented: he is of all Beaſts the goodlieſt, ſtatlieſt, and moſt manly, and for the uſe of Man, the fulleſt both of outward and inward profit, as in his fleſh for the nourſhment of Mans body, and in his other members for helps in Phyſick: as the bone in his heart, which is Soveraign for all inward faint ſickneſſes, for Poyſon, the Plague, and hard Travail in women; his blood excellent for all kind of Fluxes,

and to make the skin white and ſmooth; his pizle good for the Colick and bloody-flux; His Horne a moſt ſoveraigne Cordial againſt venome: his fuet good for ſwellings, Gouts, and Humors, and his skinne, which is ever a during and Gentlemanly cloathing: and of Stagges, the olded and greateſt is the beſt.

How to know an old Stag.

The perfect ſigns to know an old Stagge by, are theſe; if when you take his view upon the ground, you ſee he hath a large foot, a thick heele, and a deep printing, and open cleft, and a long ſpade; then be aſſured he is old: alſo if his legge be long, and his bone thick, it ſhewes age, beſides your old Sagge doth not over-reach, when your younger Deer doth: alſo you ſhall know his age by his ordure, as thus if it be printed (as it will be from *July* to *Auguſt*) or writhen round, or flat, or broad, as it will be in *June*, and therewithall be groſs and fatty, then he is an old Stagge; but if contrarily ſmall and dry, then he is but a young Deer: you ſhall know his age by the tines of the hornes, for if he have ten, twelve, or fourteen tines, he is a Deer of reaſonable age, but if the beame bee thick and great, then hee is an old Deer; alſo if hee carry but ſome ſix or eight tines, and a ſmall beame, then hee is a young Deer, and not above three or four years old, for the Red Deer is ſaid the firſt year to have no head, the ſecond but onely daggers, and the third tines.

The caſt of Heads.

Stags yeerly caſt their heads in *March*, *April*, *May*, or *June*, and in no other months, according to the goodneſſe of the Soil wherein they feed, for the richeſt ground beareth ever the earlieſt Deer, and a Deer is never ſaid to be in ſeaſon, nor may hee by good rule be hunted till he have caſt his head.

How to find a Deer.

The principall quality in a Husbandman, is, to know how and where to find a Deer: for if hee be ignorant in their haunts, hee may wander long, and loſe much labour. Therefore hee ſhall know, that a Red Deer naturally haunteth in *November* amongſt Furrs, Whins, or thick Shrubs; In *December* amongſt thick and ſtrong woods. In *January* in Corn-fields of Wheat and Rye. In *February* and *March* amongſt young and thick buſhes; In *April* and *May* in Coppices and Spring; In *June* and *July* in outwoods, and purlews which are neareſt unto green Corn, and

and in *September* and *October*, after the first showers of rain they go to Rut.

Now when the Huntsman will at any time search any of these places to find his game, hee must bee carefull by no means to go downe, but up the wind; for a Deer is of most dainty sent, and upon the least fault will fly and leave his feed: therefore hee must come warily and closely, with a quck ear, and a ready eye.

The hunting of the Stag.

Now the best time to find out your Game, is early before Sunne rise, at which time the Deer goeth to his food: from whence you shall watch unto his Leir, and having lodged him, you may returne home and prepare all thing for the dayes hunting: for be assured, except violently compeld, he will not stir until Evening.

Now for the manner of his hunting: you shall first cast off your finders, neer his place of lodging, and after they have hunted him about a ring or two, you shall cast in the rest of your hounds, and beeing in full cry and main chase, you shall give them comfort both with horne and sight of the Deer, and take what especial notes or marks you can from him, so that as much as is possible you may know him from any other Deer; then at every default, as soon as the hounds are in cry again, you shall make in to the hunted Deer, and view him, and if you find it to bee a fresh Deer, you shall rate the Dogs, and bring them back to the default, and there make them cast about again, untill they have undertaken the first hunted Deer, then give them comfort by hollowing and Gibelts, and so continue the chase till you have either set up the Deer or slain him, ever and anon having a watchfull eye unto change: for it is the nature of a Deer, when he is once imbost, or weary, to seek where hee may find another Deer, and to beat him up and lay himselfe downe in his place.

To know when a Stagge is weary, you shall see him imbost, that is, foaming and slavering about the mouth with a thick white froath, his hair will look blach, shining and foul with sweat, and hee will rappish off, that is, he will ever and anon be lying down and lurking in dark holes and corners, and for his last

To know when a Stag is weary.

Refuge hee will betake himſelfe to the ſoyl, which is, hee will leape (if he can) into rivers, ponds, or other water, out of which you ſhall force him either by art or ſtrength: And thus much for the Chace or hunting of the Stagge.

Of the Buck. Now for the hunting of the Buck: foraſmuch as they are moſt uſually kept in parks, and that every Keeper, whick is worthy to be a Keeper, may ſooner from his own experience then from any Reading, get the experience of the ground hee tendeth, and ſith hee is bound both by the Laws of Huntſmen and good manners, to give every Man contentment, that is priviledged to hunt in his ground: And ſith whoſoever can hunt a Stagge well, cannot hunt a Buck ill, the Red Deer being ever far more curious to hunt, then the Fallow, I will not ſpend any more time to write of it, but referre you to thoſe Rules which are already Rehearſed.

Of the Hare. Touching the hunting of the Hare, which is every honeſt Mans, and good Mans chaſe, and which is indeed the freeſt, readieſt and moſt induring paſtime, and likewiſe in it's own kind, full of good profit for Mans Preſervation: For though the beaſt be but little, yet are the members worth injoyment, as the fleſh, which Of her profits. is good for all manner of Fluxes; the brains good to make children breed their teeth with eaſe; the wool excellent to ſtanch blood; the Gall ſoveraign for ſore eyes, the blood which will kill Rheume, and Worms; the ſtifling bone, which being worn, taketh away the pain of the Cramp, with many other good things beſides.

The hunting of the Hare. Touching the hunting of the Hare, you are firſt to regard the place of hunting, as whether it bee in Woods, or Champain: if in Woods, you ſhall not caſt off your dogs in the thickeſt of the covert, but rather beat the buſh cloſe or ſhrubby ground near adjoyning to the cover: for though in the Woods you may ſooner find a Hare; yet commonly you ſhall find ſuch change therewithall, that you ſhall hardly bring any forth to worth your pleaſure, where, on the contrary part, if you find any in thoſe neighbouring grounds, ſhe will preſently fly forth into the champane: becauſe naturally a Hare will refuſe the covert, till ſhee Where to find hares. begin to be weary; and a Hare being once heated, is not ſo eaſily

ſily loſt upon a freſh change, as when the ſents are of equal coolneſſe. If you hunt in the champane, you ſhall firſt beat thoſe places which are moſt likely, as where Gorſe or Whinnes grow, or in grounds that are all tusks of ruſhes, ſhort linge, bramble buſhes, or ſuch like: or if the champain be more plain and void of ſuch places, then you ſhall at the beginning of the year repair to the ſhrubs, about Chriſtmas to the fallows and in *March* to the green Corn; for thoſe are the moſt uſual hounts for the beſt Hares, and in all theſe places you ſhall regard the Form, or Hares ſeat well, and know whether it be old or new, as if the Form be plain and ſmooth within, the pad before it flat and worn, and the pricks ſo new, and eaſie to be ſeen, that the earth appear black, and as it were preſently broken, then is the Form new, and if the Hounds call upon it, then may you hunt from thence, and upon the trail recover that Hare: but if the Form look old and rough within, and the pad it ſelf be not ſmooth, nor any pricks to be diſcerned therein, then it is old, and if the Hounds call upon it, you ſhall rate them, for the ſent is old, and all the labour will be loſt you ſpend upon it.

The knowledge of the Hares Form.

The next thing you obſerve muſt be the ſhifts and ſleights of the Hare, when ſhe is wearily hunted, as her doublings and windings, and at every default give the Hounds leiſure enough and compaſſe enough in the caſting about of your rings for the unwinding of the ſame, then you ſhall obſerve her leaps and skips before ſhe ſquat, and beat all thoſe places very curiouſly which are likely to give her any harbour, and though the loſſe ſeem never ſo dangerous, yet not to be diſcouraged, but to continue your ſearch, becauſe when ſhe cometh to thoſe hard ſhifts ſhe is at the laſt caſt, and cannot ſtand long before the Hounds. Many other circumſtances there are, but they are ſo generally known to almoſt every man that any way affecteth this pleaſure, that it is needleſſe to make further relation thereof; and therefore I hold this ſufficient for the hunting of the Hare.

The Hares ſleights and ſhifts.

Now for the hunting of the Fox, or Badger, they are chaſes of a great deal leſſe uſe, or cunning then any of the former, becauſe they are of much hotter ſent, as being intituled ſtinking ſents and not ſweet ſents, and indeed very few Dogs but will hunt them with

The hunting of the Fox or Badger,

with all eagerneſſe; therefore I will not ſtand much upon them, but adviſe you to reſpect well their haunts and coverts, which commonly is in Woods and buſhy places, and to take knowledge of their earths, and Kennels, and as near as you can when you go about to hunt them, to ſtop up their Kennels, and keep them out that fling forth, that they may be the ſooner brought to their deſtruction; the chaſe is profitable and pleaſant for the time, inſomuch as there are not ſo many defaults, but a continuing ſport; yet not ſo much deſired as the reſt, becauſe there is not ſo much art and cunning; and thus much for chaſes, and the general uſe of all kind of hunting.

The end of Hunting.

Of

Of Hawking.

CHAP. V.

Of Hawking, with all ſorts of Hawks, and the whole Art thereof.

IF your Engliſh Husband-man ſhall for his Recreation, chuſe the pleaſure of Hawking which is a moſt Princely and ſerious delight; he ſhall underſtand that all Hawks are divided into two kinds, the long winged Hawk, and the ſhort: the long winged Hawks which are meet for our Husbandmans recreation, are the *Faulcon gentle*, and her *Tercell*; the *Gerfaulcon* and her *Genkin*; the *Saker*, the *Lanner*, the *Barbary Faulcon*, the *Merlin*, and the *Hobby*: and the ſhort winged *Hawks*, *are the Goſhake*, the *Tercell* of the *Goſhake*, the *Sparrowhawk*, and the *Munket*. Kinds of hawks.

The *Faulcon gentle*, which is the principall of *Hawks* may be made either for the field or river, and will flie at the Partridge, or at the Mallard; the *Gerfaulcon* will flie either at the Herron; the Saker at the Crane or Bitter; the *Lanner* will flie at the Partridge, Pheſant, or Chooffe; the *Barbary Faulcon* at the Partridge only; the *Merlin* and the *Hobby* at the Lark, or any ſmall bird whatſoever; the *Goſhawk* or *Tercell* of *Goſhawk*, at the Partridge, Pheſant, or Hare; the *Sparrow-hawk* at the Partridge or Black bird, and the *Musket* at the Buſh only; and all theſe Hawks are hardy, meek, and loving to the man. The flight of hawks.

The manning of hawks.

All Hawks generally are manned after one manner, that is to say, by watching and keeping them from sleep, by a continuall carrying them upon your fist, and by a most familiar stroaking and playing with them, with the wing of a dead foul, or such like, and by often gazing and looking them in the face, with a loving and gentle countenance, and so making them acquainted with the man.

Of Luring hawks.

After your Hawks are manned, you shall bring them to the Lure by easie degrees, as first, making them jump unto the fist, after fall upon the Lure, then come to the voice, and lastly, to know the voyce and Lure so perfectly, that either upon the sound of the one, or sight of the other, she will presently come in, and be most obedient, which may easily be performed, by giving her reward when she doth your pleasure, and making her fast when she disobeyeth: short-wing'd hawks shall be called to the fist only, and not to the Lure; neither shall you use unto them, the loudnesse and variety of voice, which you do to the long winged Hawks, but only bring them to the fist by chirping your lips together, or else by the whistle: And in this manner of Luring, and calling of hawks, (for short-winged hawks are said to be called, and not Lured) you shall specially acquaint your hawk with three things: First boldnesse and acquaintance with men, dogs and horses; then that she be eager and sharp set before the Lure be shewed her, knowing both the morning and evening hours of her luring; and lastly, to delight her the more with the Lure, to have it ever garnished on both sides with warm and bloody meat.

The bathing of hawks.

When your Hawks are throughly manned and lured, and are come to the height of flesh and good lust, you shall then spy out a fair day when the weather and aire is most temperate, and carry your hawk to some fair, little, shallow, sandy, running brook, or Rundle, where the water is quiet and still, and where your hawk may stand up to the mid thigh therein, and having pickt her down, and made her fast hard by the verdge thereof, you shall take off her hood, and go a little way from her, and see whether she will bathe therein; but if you find her fearful of the water, you shall with a little stick paddle in the water a while before

before her, and then depart from her again, and let her then bathe therein as long as ſhe pleaſeth: this done, you ſhall take her upon your fiſt, and give her a bit or two of meat, then hold her in the Sun, and let her pick, prune, and dry her ſelfe again: if you cannot come to any River, Brook, or Rundle conveniently, then you ſhould provide either a large baſon, or a broad ſhallow tub, and ſo in it let your hawk bathe as oft as occaſion ſhall ſerve, for this bathing giveth a hawk courage, boldneſſe, and a great appetite, and would commonly be uſed the day or morning before any flight: If it be in the winter that your hawk batheth, when no Sun ſhineth, you may then dry her as well by the gentle air of the fire as otherwiſe.

Of enſeaming giving, caſting and ſcouring.

To enſeam your Hawk, which is to cleanſe her from greaſe, fat and glut, which lieth inwardly in her body, and which you ſhall know by her round thighs, her fleſh, and full mewtings; then when you feed her in the morning, give her a bit or two of hot meat, and the night following little or nothing; then morning and evening after, feed her upon the fleſh of a Rook waſht in two waters, till you feel the pinions of her wings more tender then they were before, then give her caſting according to her nature, as was before ſhewed, and once in two or three dayes give her a hens neck well jointed and waſht in water, which will by the ſharpneſſe thereof break the kels and filmes of fat which are in her body; then every morning you ſhall give her a quick traine Pidgeon, and keep her ſo long upon her wing, that by her own moderate exerciſe, ſhe may melt and diſſolve the greaſe that moleſteth her, which after it is broken, you may take away, by giving her three or four pellets of the root of Sellandine, as big as garden peaſe, well waſht and ſcoured, and if you ſteep thoſe pellets in the ſyrup of Roſes, the ſcouring is much ſtronger.

Of flying at the Pheaſant or Partridge.

When your Hawk is manned, lured, and enſeamed, you ſhall then bring her to her flight, which if it be at the Pheaſant or Partridge in woody and cloſe grounds, then you ſhall when you lure the hawk, caſt your lure into ſome lovv Tree or Buſh, that thereby you may bring her to take the ſtand; which when ſhe doth, you ſhall then draw out your lure, and giving her notice thereof, make her ſeize thereon, and ever feed her on

the ground, and under a buſh, the practice whereof will bring her to delight in the ſtand, and to mark all the advantages which ſhe ſhall get from thence; then bringing her to either Pheaſant or Partridge, make her flie at a young one firſt, that being more fooliſh, and eaſier ſlain, ſhe may take delight in her conqueſt. But if you flie any long winged Hawk in the champane, then you ſhall by all means poſſible keep her from the ſtand, and only maintain her upon her wing, till you ſpring the Partridge underneath her, and then ſtooping upon the advantage, the prey can hardly eſcape her: yet for the more ſure killing of the game, and entring of young Hawks, you ſhall firſt ſpring the Partridge and mark them, then being come to the mark, caſt off your Hawk, and when ſhe is gotten to the height of her gate, lay in your Spannels, and then retriving the Partridge underneath her after the firſt flight, it is impoſſible ſhe ſhould eſcape: And in this ſort you may flye all manner of long-winged Hawks, for it is not proper to flie them from the fiſt, although moſt of our late Faulconers now adayes uſe it; but for your ſhort-winged Hawks, you ſhall flie them from the fiſt only: And therefore to make them hardy and valiant, you ſhall firſt enter them at an old field Partride, laid in a hole, and covered either with a ſodde, board, or hat, at which you ſhall faſten a ſmall Creance, and then uncoupling your Spannels, as they are ranging about, ſuddenly, when your Hawks head is towards the Partride, pluck off the ſodde or hat, and let the train go, and the Hawk after it, which aſſoon as ſhe hath ſlain, reward her very well, and thus doing twice or thrice, you may after venter to flie her at your pleaſure.

Of flying at fouls.

To make your Hawk flie at foule, which is called the flight at the River, you ſhall firſt whiſtle off an approved well quarried Hawk that is a ſure killer, and let her enew the foule ſo long, till ſhe bring it to the plunge: then take her down and reward her, and ſet her by, yet ſo as you may have her ready to uſe at your pleaſure, then whiſtle off your young Hawk, and when ſhe is at the height of her gate, and that you have ſhewed her water divers times to make her the more inward, and by a gibbet call'd her in, when at any time ſhe hath looked out. Then being juſt over the fowl, make in with all your company on every ſide the River,

River, and ſo lay forth the ſowle, which if your Hawk ſtoop, ſtrike, and truſſe, you ſhall preſently make into her, and help her, and then croſſing the ſoules wing, or breaking them, let your Hawk take her pleaſure thereon, but if ſhe do not ſlay the ſoule at the firſt ſtooping, then you ſhall give your hawk pleaſure to recover her gate again, and then lay forth the ſoul as before, not leaving thus to do till you have landed it, and that the Hawk hath ſlain it, and then reward her as aforeſaid: But if ſuch a miſchiefe ſhall fall out that the ſoul do ſcape and break away: then you ſhall be ſure to have a little Mallard ready in your bag, which you may caſt forth, and ſo reward your Hawk thereon.

Helps for faults in long winged hawks and firſt of the ſtand.

If your long winged Hawk flying at the River, or in champane fields, uſe to take ſtand, which is a foule fault, you ſhall firſt by all means ſhun flying neer Trees or Covert: but if that do not ſuffice, then you ſhall have divers trains in divers mens hands, and when the Hawk offers to go to the ſtand, let him which is next her caſt out his train, and ſhe kill it, reward her: this doing once or twice will reclaim her, or nothing.

Againſt frowardneſs.

If your Hawk through pride of greaſe or otherwiſe, be froward and coy, you ſhall not when ſhe kils, reward her as you were wont, but conveying ſome other cold meat cunningly under her, let her take her pleaſure thereon; and ever with the meat give her ſome feathers which may ſcowre her, and make her to caſt, for this will recover her ſtomack, and make her more carefull and diligent.

To make a hawk look inward.

If your Hawk be of a wild and ſtirring nature, and will not look inward towards the man with her head, but rake and gaſe after every check, neither reſpecting whooping or gibbeting, in this caſe you muſt followv her and lure her back, and as ſoon as ſhe turneth in her head, ſhevv her the lure, to vvhich if ſhe ſtoop, then preſently revvard her, and thus do ſo oft as ſhe rangeth, till ſhe be brought unto that Love to your voice and affection to the Lure, that ſhe vvill forget her other extravagant thoughts.

When your Havvk is brought to flie to an extraordinary high pitch, to maintain and keep her in the ſame manner of flying ſtill, you ſhall not flie her above one flight in a day at the moſt;

for nothing bringeth her down more then over wearineſſe: Alſo you ſhall not then keep too extream a ſtraight hand upon her, for the too much greedineſſe of the Quarry makes her ſlacke her flying. Alſo, you ſhall not flie her upon Rundles, or ſmall brooks, but upon plaſhes and broad Rivers; you ſhall not ſuffer her to flie too long, but after two or three ſtoopings, and a croſſing, although ſhe miſſe it, take her down with the Lure or train, and reward her, for this encouragement will maintain her in her goodneſſe.

To bring hawks upward.

If your hawke be high flying, yet ſloathful to go to her Gatte, or elſe now and then ſtooping before there be cauſe, and ſo loſing her way, which many times happeneth when either the hawk is kept too ſharp, or flown out of her due time; any of which faults when you perceive, you ſhall then upon the doing thereof give her a dead Quarry, and then hood her up without reward, and an hour or two after, call her to the Lure, and feed her: and thus do as oft as ſhe offendeth: yet for the more ſure prevention thereof, I would have every Faulconer to try the naturall diſpoſition of his hawk, and find whether ſhe flyeth better on a ſtreight hand, or an open, and whether early or late, and ſo forth, and according to her own nature, ever to keep her.

Faults in ſhort winged hawks, firſt of turning tail.

Short winged Hawks, as *Goſhawks* and *Sparrow-hawks*, will many times neither kill their Game, nor flie their Game to mark; but will give it over after a little flying, and (as Faulconers term it) turn tail to it, which when you ſee, you ſhall incourage your dogs to hunt and caſt before your hawk a train Partridge, as it were the wild one, and make her ſeize it, and feed well upon it, to encourage her the better; and thus do twice or thrice, which if you ſee it prevail not, then eſteem her not, but make her away, for ſhe will hardly ever be reclaimed.

If a hawk will not flie at all.

Hamks that have never been acquainted with prey, will many times not flie at all; but taking a tree, will ſit and look after the game, which fault to amend, you ſhall ever feed her upon quick Birds, and make her foot them, and then going into the field, which is champane and plain, after you have rid up and down a pretty ſpace with the hawk unhooded, you ſhall cauſe one of your company to caſt out a field Partride before your hawk. Then let

let her flie at it, and ſo ſoon as ſhe hath footed it, let her feed thereon at her pleaſure, and do thus three or four times, till ſhe be well in blood, and you ſhall find her valiant quickly.

If your hawk be ſo fond of the man, that ſhe will not flie from him, but after a ſtroke or two, return to him again; you muſt then but ſeldom be familiar with her, and let her rather feed her ſelfe then be fed by you, and as oft as ſhe commeth ſo unproperly unto you, you ſhall give her no reward; but when ſhe forſaketh you, and killeth the game, then you ſhall well reward her, and then make her both familiar with men, dogs, and horſes; for to take joy or diſlike to any of them, is a miſchief a great deal worſe then the former. Too much fondneſſe of the man.

To ſpeak of the mewing of long winged hawks, you ſhall underſtand that ſhe may be ſet down, that is, put into the mew about the middle of *April*, at which time if you find they have any lice, you ſhall pepper them, and put them into the Mew, which if it be a low place upon the ground free from noiſe, vermine, or any evill air, then it is called mewing at the ſtone or ſtock, but if you mew in any high room with open windowes towards the *North*, or *North-eaſt*, then it is called mewing at large: If you mew at the ſtock, you ſhall have a broad Table in the midſt of the room, on which you muſt place ſand, gravel, ſtone, ſods, and tubs for water, and in the midſt of theſe a free-ſtone or block of two foot high, to which you ſhall faſten your hawk with a turvell of iron, ſo that at no time her leaſe may be intangled; this manner of mewing may be in the Faulconers own bed-chamber, or in any other ſafe room at his pleaſure; the beſt meat in the mew, is any quick birds or foul, dogs fleſh, and ſuch like: If you mew your hawk at large, you ſhall put her looſe into the mew, having ſundry pearches therein, ſome high, ſome low for her uſe to ſit on; and in this mew alſo you ſhall have ſand, ſtones, gravel, green ſods, and water, all which you ſhall renew as oft as need do require, and in the midſt of them a block or two, whereon to tie her meat, which meat ſhall be the ſame formerly ſpoke of, and given at certain and due times, without fail or alteration. Mewing of long winged hawks. Mewing at the ſtone. Mewing at large.

If you intend to mew a ſhort winged hawk, as the Goſhawk, or ſuch like, you ſhall in *March* after you have ſcowred her, and made

made her clean from lice, cut off her the leſſe, and throw her into Mew looſe, either in a high room or a low room at your pleaſure; let her perches be lined with canvaſſe, or with woollen liſts for the ſafety of her feet, let her have ſtore of water for bathing, and oft renewed, and ſtore of meat, as live Pigeons, warm Mutton, warm Goat, or Dogs-fleſh, any of which will make her mew quickly.

When to draw hawks.

Hawks for the field would be drawn from the mew in *June*, and made ready to flie in *Auguſt*, at which time Corn is cut, and Game is ſtrong: and hawkes for the River would be drawn in *Auguſt*, that they may be ready to flie in *September*.

Diſeaſes in hawks.

Hawkes have divers infirmities and diſeaſes, as Feavers, Palſey, Impoſtumes, ſore eyes, and Nares, Megrims, Pantas, caſting her Gorge, foulneſſe of Gorge, Wormes, Fillanders ill Liver, or Gout, Pinne in the foot, breaking the pounce, Bones out of joint, Bones broken, Bruiſes, Lice, Colds, Frounce, Fiſtulaes, Stone, much gaping, more foundring, privy evill, taint in the Feathers, loſs of appetite, broken wind, blow on the Wing, wounds, ſwelling, eating their own feet, taking up of veins in Hawks, Cramp, and a world of others: all which foraſmuch as I have ſhewed the Medicines, and cures thereof in the former Treatiſe called *Cheap and Good*, I will refer you unto the ſame, and not doubt but it will give you ſatisfaction.

CHAP. VI.

Of Courſing with Grey-hounds, and the Excellencies of that ſport.

Of courſing with Grey-hounds.

NOw if the mind of our Husbandman be not ſo generally taken with the delight and pleaſure of this recreation of Hawking, but that he preferreth before it the delight of Courſing with Grey-hounds, which is a very noble and worthy paſtime, he ſhall in it obſerve theſe four things, the Breed of Grey-hounds, their ſhape, their diet, and the Lawes belonging to the ſame.

Breeding of Greyhounds.

Touching the breed of Grey hounds, you are principally to reſpect the Countries in which they are bred, and nouriſhed

riſhed, as that it be a champane plain, and without covert, where a hare may ſtand forth, and indure a courſe of two miles, or more, as it ſhall happen (for the courſing of a hare is that which I purpoſe moſt to entreat of) becauſe in a cloſe country full of covert, where a hare cannot run above a quarter of a mile, or leſſe, both the pleaſure of the recreation is taken away, and the Greyhound by an inſufficient exerciſe is made unapt, and unfit for that for which he was created.

Beſt places for breed.

Now of champane countries, they are of three kinds, as the low vales, as are the vales of *Belvoire*, the vale of white *Horſe*, the vaile of *Eaſham*, and ſuch like; the high downs and heaths, as about *Salisbury*, *Ciſſeter*, *Lincoln*, and many ſuch like places; and the middle between both, as the Country of *Northampton* and *Leiceſter*, and other like them: All which are very excellent places for the breeding and training up of the beſt Greyhounds; yet of the three your vallies or middle ſoyles, which for the moſt part are arable grounds, are much better to breed and train on, then your downs and heaths, becauſe they are much more labourſome, rough, heavy, and in the winter ſeaſon full of much trouble and falſe root-hold, inſomuch, that a dog which is able to run ſtrongly, ſwiftly, and ſurely there, muſt neceſſarily do it ten times better when he comes to the ſmooth plain, and carpet-like down: where on the contrary, the dogge which is trained upon thoſe even downs, though he be right famous and excellent, when he comes to run in the deep well plowed field, is to ſeek where to beſtow his feet, and can neither ſhew ſpeed, cunning, nor indurance.

The beſt Greyhounds.

Nimbleneſs in Greyhounds.

Now the Gentlemen which dwell on the downs and plain grounds, to maintain the reputation of their dogs, affirm them to be much more nimble and cunning in turning, then the vale dogs be, becauſe the fairneſſe of earth giveth them ſo much advantage over the hare, that having her even (as it were) in a manner under their feet, ſhe is put more to her ſhifts, and ſtrives with greater art of ſleights to deceive, and get advantage of the Greyhound: And it is true, for by reaſon of the advantage of their hils, which are great and ſteep, though ſmooth and plain, I have ſeen a vale-dog ſo much deceived, that upon a turn, he hath loſt more ground then hath been recoverable in the whole

course after: but there is no want of goodneſſe, but a little skill, which a months courſing will bring a dog ſo ſufficiently unto, that he will not need any other reformation, then the knowledge of his errour, by his loſs of labour. So that I conclude the good dog upon the deeps, will ever beat the good dogs on the plain.

Difference between Doggs and Bitches.

It is an old received opinion amongſt many men of the Leaſh, that the Grey hound bitch, will ever beat the Grey-hound dog, by reaſon of her more nimbleneſſe quickneſſe and agility: And it is ſometimes ſeen, that a perfect good bitch indeed, hath much advantage of an ordinary dog: but if the good dog meet with the good bitch, there is then no compariſon but the dog will be her Maſter; in as much as he exceedeth her both in length and ſtrength, the two main helps in courſing; for her nimbleneſſe is then no help: ſith a good dog in the turn, will loſe as little ground, as any bitch whatſoever.

Dogs and Bitches for breed

Yet thus much I would perſwade all Gentlemen of the Leaſh to be very careful in their breeding, to breed upon the beſt bitches they can provide; for it is found in experience, that the beſt dog upon an indifferent bitch, will not get ſo good a whelp, as an indifferent dog upon the beſt bitch: And amongſt theſe obſervations in breeding Grey-hounds, you ſhall obſerve to have your dogs and bitches of equall and indifferent ages, as about three or four years old at the moſt; but in caſe of need, your bitch will endure a great deal longer then your dog, and to breed with a young dog, or an old bitch, may bring forth an excellent whelp.

The ſhapes of Greyhounds.

Touching the ſhapes of Greyhounds (from whence you ſhall take the beſt collections for their goodneſſes) they are certain and moſt infallible: Therefore touching Greyhounds, when they are puppies or young whelps, thoſe which are moſt raw-bon'd, lean, looſe made, ſickle or crooked houghr, and generally unknit in every member, are ever likely to make the beſt dogs, and moſt ſhapely: but ſuch as in the firſt three or four months are round, and cloſe truſt, fat, ſtreight, and as it were full ſim'd and knit in every member, never prove good, ſwift, or comely.

Now after your dog comes to full growth, as at a year and a halfe, or two years old, he would then have a fine long lean head

head, with a ſharp noſe, ruſh grown from the Eye downward: A full clear eye with long Eyelids, a ſharp ear, ſhort and cloſe falling, a long neck a little bending, with a looſe hanging wezand, a broad breaſt, ſtrait forelegs, ſide hollow, ribs ſtraight, a ſquare and flat back, ſhort and ſtrong fillets, a broad ſpace between the Hips, a ſtrong ſtearn or tayle, and a round foot, and good large clefts. Now for the better help of your memory I will give you an old rime, left by your fore-Fathers, from which you ſhall underſtand the true ſhapes of a perfect Greyhound, and this it is.

If you will have a good tike,
Of which there are few like,
He muſt be headed like a ſnake,
Neck like a Drake,
Backt like a beam,
Sided like a bream,
Tayled like a Rat,
And footed like a Cat.

Theſe being the principall members of a good Greyhound, if they reſemble the proportions of the things above named, the dog cannot chuſe but be moſt perfect.

When you have thus a perfect and well ſhap'd Greyhound, your next rule is to apply your ſelfe to the dyeting and ordering of him, for the pleaſure to which you keep him; that bringing him to the uttermoſt height or ſtrength of wind, you may know the uttermoſt goodneſſe that is within him, which, diſorderly and foul keeping will conceale, and you loſe a Jewell for want of knowledge of the value. Dyeting of Greyhounds to courſe.

Dyeting then of Greyhounds conſiſteth in four eſpecial things; to wit, food, exerciſe, airing, and kennelling; the firſt nourifhing the body, the ſecond the limbs, the third the wind, and the laſt the ſpirits. Of what dieting conſiſteth.

To ſpeak then of food, it is two-fold, either generall, or particular; generall as for a continuall upholding and maintaining of a dog in good ſtate of body, being in good plight and liking; or particular, when a dog is either poore, ſick, Of food.

or prepared for wager, ſtandeth in need of particular foods of advantage.

Of generall food. The beſt generall food for the ordinary upholding of a dog in a good ſtate is, chippings, cruſts of bread, ſoft tender bones or griſſels of Veale, Lamb, or ſuch like, firſt ſcalded in beefe-broth not very ſalt, or other broath, in which hath been boiled, Mutton, Veal, or Veniſon, or any kind of Pullen, or for want thereof, other clean ſcalding water. After your chippings or bread is ſcalded, you ſhall let it ſtand and coole, then when your feeding-hour commeth, you ſhall take as much good milk, ſlotten milk, or butter milk (but the beſt is moſt wholeſome) as will fully or more then whiten the ſame: for it is to be intended that your water muſt be all drunk up into your bread, and your milk muſt only make it ſwim, and with this feed your dog morning and evening after you come from walking him, and give him a good and ſufficient meal thereof, for this will only maintain and uphold him in good ſtate of body, being ſtrong and luſty in fleſh before.

Of particular food. For particular food, which is when a dogge is poore, ſick, or to be prepared for wager, they be theſe: Firſt, if he be poor in fleſh, ſickly or weak, the beſt food you can raiſe him up withall, is to take ſheeps heads, wool and all, clean waſht, and break them all to pieces; then put them in a Cauldron or Kettle, and after the water hath riſen, and is clean ſcum'd put unto it good ſtore of Oatmeal and ſweet pot-herbs ſmall chopt together, and ſo boil it till the fleſh be tender; then with this meat and the pottage feed your Grey-hound morning and evening, and it will ſoon put him into great luſt and ſtrength: but if you will prepare him for match and wager, then you ſhall make him this diet-bread: take a peck of the fineſt and dryeſt Oatmeal, and two pecks of good wheat; and having ground them together, boule the meal through a fine boulting cloath, and then ſcattering amongſt it a pretty quantity of Any-ſeeds and Licoras well beaten together, knead it up with the whites of egs, new Ale and barm mixt together, and ſo bake it in pretty round loaves reaſonable hard: with this bread either ſealded, as was before ſhewed in your chippings, or put into the pottage with ſheeps heads warth, feed your dog morning and evening, to with half an hour after Sun-riſe, and half an hour before Sun-

Food for a match.

Hours of feeding.

Sun-ſet, when you come from walking or airing him, and it will bring him to exceeding great ſtrength of body, and pureneſſe of wind.

For the exerciſe of your Greyhound, it conſiſteth likewiſe in two things, courſing and airing; and they be every way as neceſſary as is food, becauſe it only bringeth ability to his limbs, and perfitneſſe to his wind: to ſpeak then of courſing, you ſhall not faile to courſe him at leaſt twice a week, if your courſes be ſtrong and long: but thrice a week if they be but reaſonable, as a mile, or a mile and a half at moſt; and ſometimes if your courſes be ſhort, under a mile. In courſing you ſhall obſerve two things, blood and labour; blood, which is a heartning and animating of your dog to delight in the pleaſure, when he finds the reward of his pains taking; for if a dog courſe continually, and never kill the hare, the ſport will grow irkſome unto him, and therefore now and then give him ſuch advantage, that he may kill the hare: then labour, which is contrary to killing; for in it you muſt give the hare all indifferent advantage both by Law and otherwiſe, whereby ſhe may ſtand long before the dog, and make him ſhew his uttermoſt ſtrength before he be able to reach her. Of exerciſe by courſing.

After your dog hath courſed, if he kill, you ſhall by no means ſuffer him to break the hare; but having taken her from him, firſt cleanſe his mouth and chaps from the wool of the hare, and then give him to eat, the Liver, Lights and heart, and ſo take him up in your leace, lead him home, and there firſt waſh his feet in a little butter and beer, and ſo put him up in the kennell, and halfe an hour after feed him: for upon his courſing dayes, you muſt by no means give him any meat more then a white-bread toaſt and butter, or a toaſt and oyle, which muſt be given before his morning-ayring, and ſo kennelled till he go to his courſe. Of ordering dogs.

Touching ayring or walking of Grey hounds, which is a great nouriſher and encreaſer of wind, it muſt duly be done every morning before Sun-riſe, and every evening before or after Sun-ſet, in this manner: as ſoon as you have opened your kennel, and rubb'd your dog over with a clean hair cloath, you ſhall let him play a little about you, before the kennel door, then Airing after courſing.

take him up in your leash and walk him forth in the field, where for the most part are not sheep or other small Cattell, which they may out of wantonnesse indanger, and there let him loose, and give him leave to play and scope about you, so that he may skummer, pisse, and empty his body; which when he hath done sufficiently, you shall then take him up in the leash again, and so walk him home and kennell him, this you shall doe after the same manner in the evening: and also if your dog be strong and lusty at night after supper, and then bringing him home bring him to the fire, and there let him stretch and beak himselfe, and with your hand grope and cleanse him from ticks, and other filth, which done, lead him to the kennel, and shut him up for all night.

Of kennelling the Greyhound.

Now for the kennelling of Greyhounds, it is a right necessary action, and must be performed with all diligence, for it breeds in dogs, lust, spirit and nimblenesse, prevents divers mischances, and keeps the powers from spending, till time of necessity: and therefore you shall by no means suffer your dog to be out of the kennel, but in the hours of feeding, walking coursing or when you have other necessary businesses to do about him.

CHAP. VII.

The Lawes of the Leash or coursing, as they were commanded, allowed, and subscribed by Thomas *late Duke of Norfolk, in the Raign of Queen* Elizabeth.

NOw lastly touching the Lawes of the Leash, or coursing, though they be uncertainly received, and alter with mens various opinions, yet these under written were held for authentical once, and invented, received and subscribed unto by many noble and worthy Personages, suting fully with the Reasons and grounds of the pastime.

First therefore it was ordered, that he which was chosen Fewterer, or letter-loose of the Greyhounds, should receive the Greyhounds match to run together into his Leash, as soon as he came into the field, and to follow next to the Hare-finder till he came unto the Forme: and no horsemen nor footman,

on

on paine of diſgrace, to go before them, or on either ſide, but directly behind, the ſpace of forty yeards, or there aboute.

Item, That not above one brace of Greyhounds do courſe a hare at one inſtant.

Item, That the hare-finder ſhould give the hare three ſo-hows before he put her from her Leat, to make the Greyhounds gaze and attend her riſing.

Item, That the Fewterer ſhall give the hare twelve ſcore Law, ere he looſe the Greyhounds, except it be in danger of loſing ſight.

Item, That dog that giveth the firſt turn, if after the turn be given, there be neither coat, ſlip, nor wrench extraordinary, then he which gave the firſt turn ſhall be held to win the wager.

Item, If one dog give the firſt turn, and the other bear the hare, then he which bore the hare ſhall win.

Item, If one dog give both the firſt turn and laſt turn, and no other advantage between them, that odd turne ſhall win the wager.

Item, That a coat ſhall be more then two turns, and a go-by, or the bearing of the hare, equal with two turns.

Item, If neither dog turn the hare, then he which leadeth laſt, at the covert, ſhall be held to win the wager.

Item, If one dog turn the hare, ſerve himſelfe, and turn her again, thoſe two turns ſhall be as much as a coat.

Item, If all the courſe be equall, then he only which bears the hare ſhall win; and if ſhe be not born, then the courſe muſt be adjudged dead.

Item, if he which comes firſt into the death of the hare, takes her up and ſaves her from breaking, cheriſheth the dogs, and cleanſeth their mouths from the wool, or other filth of the Hare, for ſuch courteſie done, he ſhall in courteſie challenge the hare, but not doing it, he ſhall have no right, priviledge or title therein.

Item, If any dog ſhall take a fall in the courſe, and yet perform his part, he ſhall challenge advantage of a turn more then he giveth.

Item,

Item, If one dog turn the Hare, ſerve himſelfe, and give divers coats, yet in the end ſtand ſtill in the field, the other dog without turn giving, running home to the covert, that dog which ſtood ſtill in the field, ſhall be then adjudged to loſe the wager.

Item, If any man ſhall ride over a dog, and overthrow him in his courſe (though the dog were the worſe dog in opinion) yet the party for the offence, ſhall either receive the diſgrace of the field, or pay the wager; for between the parties, it ſhall be adjudged no courſe.

Item, Thoſe which are choſen Judges of the Leaſh, ſhall give their judgements preſently before they depart from the field, or elſe he, in whoſe default it lyeth, ſhall pay the wager, by a generall voice and ſentence.

And thus much for the Lawes of Courſing, and thoſe particularities which do depend thereupon: All which, I ſubmit unto the correction and amendment of thoſe Worthy, and well-knowing Gentlemen, who having the Office of the Leaſh conferred upon them, have both Authority and Power to make Lawes therein, according unto the Cuſtomes of Countries, and the Rule of Reaſon.

The end of Hunting.

Of

Of Particular Recreations.

CHAP. VIII.

Of Divers other particular Recreations.

THere be many other particular Recreations neceſſary for the knowledge and practice of our Husbandman, as firſt, ſhooting in the Long-bow, which is both healthfull for the Body, and neceſſary for the Common-wealth: the firſt, extending the Limbs and making them plyant: the other, enabling ſtrength fit to preſerve and defend his Country: And firſt, for ſhooting in the Long-bow, a man muſt obſerve theſe few Rules, firſt that he have a good Eye to behold and diſcern his mark, a knowing judgment to underſtand the diſtance of ground, to take the true advantage of a ſide wind, and to know in what compaſs his Arrow muſt flye, and a quick dexterity to give his ſhaft a ſtrong, ſharp, and ſuddain looſe; he muſt in the action it ſelf ſtand fair, comely, and upright with his body, his Left foot a convenient ſtride before his Right, both his hammes ſtiff, his left arme holding his Bow in the midſt ſtretcht ſtreight out, and his Right arm with his three firſt fingers and his thumb drawing the ſtring to his right ear, the notch of his arrow reſting between his fore-finger, and long finger of his right hand,

Of ſhooting in the Long-bow.

and the ſteal of his Arrow below the feathers upon the middle knuckle of his fore-finger on his left hand, he ſhall draw his Arrow up cloſe unto the head and deliver it on the inſtant without hanging on the ſtring; the beſt Bow is either Spaniſh or Engliſh Yew, and the worſt of Witchen or Elme; the beſt ſhaft is of Burch, Sugar-cheſt, or Brazel; and the beſt feathers Gray or white.

The Markes to ſhoot at are three, Butts, Pricks, or Rovers: the Butt is a levell Marke, and therefore would have a ſtrong Arrow with a very broad Feather: The Prick is a Mark of ſome compaſſe, yet moſt certain in the diſtance, therefore would have nimble ſtrong Arrows with a middle feather, all of one weight and flying: the Rover is a Mark uncertain, ſometimes long ſometimes ſhort, and therefore muſt have arrows lighter or heavier, according unto the diſtance of place.

Of Shooting in Croſſe-bowes.

If infirmity in the arme, or back, take from a man the uſe of the Long-bow, he may then with a Croſs-bow made for gaſel carried upon a ſtring, and the neather end placed in a reſt, with arrowes made ſtrong, heavy, and ſuitable to the ſtrength of the Bow, ſhoot at all the former Marks, and reap the ſame pleaſure he formerly did with his long bow.

Of Bowling.

There is another Recreation, which howſoever unlawfull in the abuſe thereof, yet exerciſed with moderation, is even of Phyſitians themſelves held exceeding wholſome, and hath been preſcribed for a Recreation to great Perſons, and that is bowling, in which a man ſhall find great Art in chooſing out his Ground, and preventing the Winding Hanging, and many turning advantages of the ſame, whether it be in open wide places, or in cloſe Allies: And this ſport the chooſing of the bowl is the greateſt cunning: your flat bowls being the beſt for cloſe Allies: your round byaſſed bowls for open grounds of advantage, and your round bowles like a ball, for green ſwarths that are plain and levell.

Not inferiour to theſe ſports; either for health or action, are the Teniſe, or Baloon; the firſt being a paſtime in cloſe or open Courts, ſtriking a little round ball to and fro, either with the palmes of the hand, or with Racket. The other a ſtrong and moving ſport; in the open field, with a great ball of double Leather fil'd

fil'd with wind, and ſo driven to and fro with the ſtrength of a mans Arm, arm'd in a bracer of wood; either of which actions, muſt be learnt by the Eye and practice, not by the Ear or Reading.

Of Angling, &c.

CHAP. IX.

The whole art of Angling; as it was written in a ſmall Treatiſe in Rime, and now for the better underſtanding of the Reader put into Proſe, and adorned and inlarged. And firſt of Angling, the vertue, uſe, and Antiquity.

SInce Pleaſure is a Rapture, or power in this laſt Age, ſtoln into the hearts of men, and there lodged up with ſuch a careful guard & attendance, that nothing is more Supreame, or ruleth with greater ſtrength in their affections; and ſince all are now become the Sons of Pleaſure, and every good is meaſured by the delight it produceth: what worke unto men can be more thankfull then a diſcourſe of that pleaſure which is moſt comly, moſt honeſt, and giveth the moſt liberty to Divine Meditation? and that without all queſtion is the Art of Angling, which having ever been moſt hurtleſſely neceſſary, hath been the ſport, or Recreation of God's Saints, of moſt holy Fathers, and of many worthy and Reverend Divines, both dead, and at this time breathing.

The uſe of Angling.

For the uſe thereof (in its own true and unabuſed nature) car-

rieth in it neither covetousnesse, deceit, nor anger, the three main spirits which ever (in some ill measure) rule in all other pastimes: neither are alone predominant without the attendance of their several handmaids, as Theft, Blasphemy, or Blood shed: for in Dice-play, Cards, Bowls, or any other sport where mony is the goal to which mens minds are directed, what can mans avarice there be accounted other then a familiar Robbery, each seeking by deceit to couzen and spoyl others of that blisse of meanes which God hath bestowed to support them and their families. And as in every contention there must be a better-hood or super-excelling; so in this, when the weaker deceipt is deprived his expectation, how doth it then fall into Curses, Oathes, and furies, such as would make Vertue tremble with the imaginations!

But in this Art of Angling there is no such evill, no such sinfull violence, for the greatest things it coveteth, is for much labour a little Fish, hardly so much as will suffice Nature in a reasonable stomack: for the Angler must intice, not command his reward; and, that which is worthy millions to his contentment, another may buy for a groat in the Market. His deceipt worketh not upon men, but upon those creatures whom it is lawfull to beguile for our honest Recreations or needfull use; and for all rage and fury it must be so great a stranger to this civill pastime, that if it come but within view or speculation thereof, it is no more to be esteemed a pleasure: For every proper good thereof in the very instant faileth, shewing unto all men that will undergo any delight therein, that it was first invented, taught, and shall for ever be maintained by Patience onely. And yet I may not say, onely Patience; for her other three Sisters have likewise a commanding in this exercise, for Justice directeth and appoynteth out those places where men may with liberty use their sport, and neither do injury to their Neighbours, nor incur the censure of incivility. Temperance layeth down the measure of the action and moderateth desire in such good proportion, that no Excesse is found in the over-flow of their affections. Lastly, Fortitude inableth the mind to undergo the travail and exchange of Weathers, with a healthfull ease, and not to despair with a little expence of time, but to preserve with a constant imagina-

nation in the end to obtain both pleaſure and ſatisfaction.

Now for the Antiquity thereof (for all pleaſures, like Gentry, are held to be moſt excellent, which is moſt antient) it is by ſome Writers ſaid to be found out by *Deucaleon*, and *Pyrrha* his Wife, after the General flood others write, it was the invention of *Saturn*, after the peace concluded betwixt him and his brother *Titan*; and others, that it came from *Belus* the Sonne of *Nimrod*, who firſt invented all holy and vertuous Recreations; and all theſe though they ſavour of fiction, yet they differ not from truth, for it is moſt certain, that both *Deucalion*, *Saturn*, and *Belus*, are taken for figures of *Noah* and his Family, and the Invention of the Art of Angling, is truly ſaid to come from the Sonns of *Seth*, of which *Noah* was moſt Principal. Thus you ſee it is good, as having no coherence with evill: worthy of uſe, in as much as it is mixt with a delightfull profit: and moſt antient, as being the Recreation of the firſt Patriarks; wherefore now I will proceed to the Art it ſelf, and the means to attain it. The Antiquity of Angling.

CHAP. X.

Of the Angle-Rod, Lines, Corks, and other tools for Angling.

IN as much as the firſt Ground Work or Subſtance of this Art of Angling conſiſteth in the implements belonging and appertaining thereunto, and that except a man be poſſeſt of them which are moſt exact, nimble, or neceſſary for the ſame, his labour is vain, and to little or no purpoſe imployed, and for as much as the Angle-Rod is the greateſt, principalleſt, and ſole Director of all other Tools belonging thereunto, I think it not amiſs to begin with the choyce and order thereof, according to the opinions of the beſt noted Anglers, which either have been in times paſt, or are at this day living.

For the choyce then of your Angle-Rod, you ſhall underſtand that ſome Anglers are of opinion, that the beſt ſhould be compoſed of two pieces, a main body, and a ſmall plyant top. The Main body would be of a fine grown ground-Witchin, or a ground Elme, of at leaſt nine or tenne foot in length, ſtreight, ſmooth, without knots, and not much differ-

fering, at either end in one ſubſtance or thickneſſe. It would be gathered at the fall of the leaf, near or about *All-hallowtide*, and laid up in ſome dry place, where it may lye ſtraight, and of it ſelf ſeaſon: For to beak them in the fire (as many do) when they are green, is not ſo good, but after they be well dryed and ſeaſoned of themſelves, then to beak them in the fire, and ſet them ſo ſtreight and even that an arrow cannot ſurpaſſe them, is excellent; then you may take off the upper rind, and what with the ſmoak, and their own age, their colour will be ſo dark, that they will give no reflect into the Water, (which is a principal obſervation). Your Rod being made thus ſtreight and ſeaſoned, you ſhall at the upper end thereof, with an augur, or a hot Iron (but a hot Iron, is the better) burn a hole about three inches deep, and, of a fingers wideneſſe: then on the out-ſide of the Rod, from the top of the hole unto the bottome, you ſhall wrap it about either with ſtrong double twiſted thred well Waxed or pitcht, or with Shooe makers thread many times doubled and well waxed with Shooe makers Waxe, and the laſt end faſtned under the laſt folds, ſo cloſe and ſo ſure, that it may by no means looſe; for this will keep the Rod from cleaving, or breaking in that ſame place where the hollowneſſe was made.

Of the top of the Angle rod.

The ſtock being thus made you ſhall into the hole fixe the Top, which would be a very ſmall ground Hazel, growing from the earth upward, very ſmooth and ſtreight, which would be cut at the latter end of the year and lye in ſeaſon all the Winter, the upper Rinde being by no meanes taken off, neither the Rod put into the fire at all, but only ſeaſoned in a good dry place, where it may lye ſtreight, and have both the Wind and ſome Ayre of the Fire to come unto it. This Top muſt bee plyant and bending, yet of ſuch a ſufficient ſtrength, that it will not break with any reaſonable jerk, but as it is any way bowed, ſo to return again to the former ſtraightneſſe. This top wand would be of a yard and a halfe, or an Ell at leaſt in length, and at the ſmalleſt end thereof would be faſtned with a warp of hair, a ſtrong loop of haire, about an inch long, to which you may at pleaſure faſten your

fiſhing

ſhing line; and the bigger end of the top muſt be thruſt into the ſocket of the ſtock, and made ſo faſt that it may not looſen nor ſhake out with any ſhaking or other reaſonable violence. And albeit the Witchin or Ground Elme are accounted the beſt to frame theſe main ſtocks of, yet I have ſeen very good ſtocks made both of Sallow, Beech, or Poplar: for the lighter your Rod is (ſo it be ſtrong) it is ſo much the better, and more for the eaſe of him that uſeth it.

The Angle Rod of one piece.

There be other approved good Anglers which allow onely the Rodde which is compoſed all of one entire peece, and think them ſtronger, nimbler, and leſſe caſual: and theſe Rods they would have choſen of an excellent ſtreight and well grown Ground-Hazel, being from the bottome to the top finely Ruſh-grown, the upper end thereof being ſmall plyant and bending. This Rod ſhould be gathered at the fall of the leafe, when the leaves are ſome fallen and ſome ſticking: as ſoon as you have cut them up, you ſhall cut away the leaves and ſmall ſprigs, yet not ſo near that you hurt the bark (for that by no meanes muſt be ſtir'd, as well for the ſtrength of the Rodde, as for the colour, which being dark will not ſo ſoon catch the eye of the Fiſh and offend them.) Then bringing your Rodds home, you ſhall lay them upon a level floor, and preſſing them down with good weights, to keep them from warping, let them lye and ſeaſon all the Winter: Then in the Spring time take them up for your purpoſe, which is onely to make the knots ſmooth, and to fix your loop of hair unto the upper end. Now of theſe Rods, the longeſt is the beſt, ſo it be ſtreight and well grown; for moſt commonly they are ſo ſhort that they will ſerve to fiſh with but in little narrow Brooks, or elſe in a Boat, in great waters.

The Anglers Rod of many pieces.

There be other Anglers, and many of the beſt and approvedſt judgment, which allow the Angle-Rodde of many pieces: as thoſe which are made of Cane: each peece exceeding another on degree, in ſuch even proportion that being fixed and thruſt one within another, they will ſhew as one even and moſt ſtreight Ruſh-grown body, without any crookedneſs or other outward evil favouredneſſe. Theſe pieces would not bee a-

bove

bove four foot in length a piece, and three ſuch pieces, which make twelve foot, are ſufficient for the ſtock of the Rodde, beſides the top. Now for thoſe ends which are the ſockets, into which you fix the other Canes, you ſhall hoop them about with fine plates of Braſs, an inch and an half broad, well ſodered, and ſmoothly filed, which will keep the Cane from cleaving: and for the top of this Rodde, the round Whalebone is thought the beſt; and ſurely in my conceit ſo it is both for this or any other Rodde whatſoever; for it is tough, ſtrong, and moſt plyant. Theſe Rodds moſt commonly are made to have the ſmall Canes thruſt down into the wide Canes, ſo that a man may walk with them as with a ſtaff, as when he pleaſeth to draw them forth, and uſe them as occaſion ſhall be offered. The onely exception which is taken at theſe kind of Rodds, is the bright colour of the Cane, which reflecting into the water, oft times ſcareth the Fiſh, and maketh them affraid to bite: But if you Fiſh in deep and thick waters, there is no ſuch matter, for the ſhadow of the Rodde is not diſcerned through the Sunne, only in ſhallow and clear Brooks it is a little hindrance; and therefore he which is a Maſter in this Art, will Umber and darken the Rodde, by rubbing it over a gentle fire with a little Capons greaſe, and brown of Spain, mixt together.

Of the Lines. Now for your Lines, you ſhall underſtand that they are to be made of the ſtrongeſt, longeſt, and beſt grown Horſe-haire that can be got, not that which groweth on his Main, nor upon the upper part or ſetting on of his tayle, but that which groweth from the middle and in moſt part of his dock, and ſo extendeth it ſelfe down to the ground, being the biggeſt and ſtrongeſt hairs about the Horſe: neither are theſe hairs to be gathered from poor, lean and diſeaſed Jades of little price or value, but from the fatteſt, founded, and proudeſt Horſe you can find, for the beſt Horſe hath ever the beſt haire; neither would your hairs be gathered from Nagges, Mares, or Geldings, but from ſton'd Horſes onely, of which the black haire is the worſt, the white or gray beſt, and other colours indifferent. Thoſe lines which you make for ſmall fiſh, as Gudgeon, Whiting, or Menow, would be compoſed of three hairs; thoſe

thoſe which you make for Pearch or Trout, would be of five hairs, and thoſe for the Chub or Barbel, would be of ſeaven: to thoſe of three hairs, you ſhall add one thread of ſilk, to thoſe of five, two threads of ſilk, and to thoſe of ſeven, three threads of ſilk. You ſhall twiſt your hairs neither too hard nor too ſlack, but even ſo as they may twind and couch cloſe one within another, and no more, without either ſnarling or gaping one from another; the end you ſhall faſten together with a Fiſhers knot, which is your ordinary faſt knots, foulded four times about, both under and above, for this will not looſe in the water, but being drawn cloſe together, will continue, when all other knots will fail; for a hair being ſmoth and ſtiffe, will yield and goe back, if it be not artificially drawn together. Your ordinary line would be between three and four fadom in length, yet foraſmuch as there are diverſities in the length of rods, in the depth of waters, and in the places of ſtanding to Angle in, it ſhall be good to have lines of divers lengths, and to take thoſe which ſhall be fitteſt for your purpoſe.

The colouring of Lines.

Theſe lines, though the naturall hairs being white or grey, be not much offenſive, yet it ſhall not be amiſſe to colour them according to the ſeaſons of the year, for ſo they will leaſt ſcare the Fiſh, and ſooneſt intice them to bite with moſt greedineſſe, and of colours, the beſt is the water green, which you ſhall make after this manner. Take a pottle of Allom-water, and put thereunto a great handfull of Marigolds, and let them boil well till a yellow ſcum riſe upon the water, then take halfe a pound of green Copperas, and as much verdigreaſe, beaten to fine powder, and put it with the hair into the water, and ſo let it boil again a pretty ſpace, and then ſet it by to cool for half a day, then take out your hair, and lay it where it may dry and you ſhall ſee it of a delicate green colour, which indeed is the beſt water green that may be. This colour is excellent to angle with in all clear waters where the line lies plain, and moſt diſcovered, and will continue from the beginning of the ſpring, to the beginning of winter. Now if you will have your lines of a yellow colour, you ſhall boyle your hair in Allom-water, mixt only with Marigolds, and a handfull of Turmerick: but, if you cannot get Turmerick, then you ſhall ſtamp ſo much of green Wa'nut-tree leaves, and mixe

it with the water, and ſteep your hair therein twenty and four hours at leaſt.

Lines of this colour are good to Angle with, in waters that are clear, yet full of weeds, ſedge, and ſuch like; for it is not unlike to the ſtalkes of theſe weeds, and it will well continue to Angle withall, the firſt part of the winter, as from before Michaelmas, till after Chriſtmas.

If you will have your Lines of a ruſſet colour, you ſhall take a part of Allom-water, and as much ſtrong Lye, then put thereto a handfull of ſoot, and as much brown of Spain, and after it hath boiled an hour or two, ſet it by to coole, and when it is cold, ſteep your hair therein a day and a night, and then hang it up to dry: theſe coloured lines are good to angle with in all deep waters, whether they be rivers or ſtanding pools, as ponds, and ſuch like, and are moſt in uſe from Chriſtmas till after Eaſter.

Now if you will have your lines of a brown or duskiſh colour, you ſhall take a pound of Umbes, and half ſo much ſoot, and ſeeth it in a pottle of Ale a good ſpace, then when it is cold, ſteep your hairs therein a day and a night, and then hang them up to dry, and the colour will be perfect; yet ever the darker you would have it, the more Umber put unto it: theſe lines are excellent to angle with in waters that are black, deep, and muddy, be they ether running or ſtanding waters, and will continue all ſeaſons of the year whatſoever, only in bright waters they are too black, and caſt too large a ſhallow. Laſtly, if you would have your lines of a tawny colour, (although in the water it ſheweth almoſt all one with the other darker colours) you ſhall take lime and water mix it together, and ſteep your hair therein half a day, and then take it forth and ſteep it double ſo long time in Tanners ouze and then hang it up to dry, and the colour will be perfect: theſe lines are beſt to angle with in mooriſh and heathy waters, which are of a reddiſh colour, and will ſerve for that purpoſe all ſeaſons of the year: if with this colour or the green, you mix a ſilver thread, it will not be amiſſe: and with the other colours, a gold thread it is good alſo: and note, that at each end of your line, you make a loop, the one to faſten to the top of your Rod,

Rod, being the larger, and the other to faſten your hook-line unto, which would be ſomewhat leſſer.

After your lines be made, you ſhall make your corks in this manner: take of the beſt and thickeſt cork you can get, and with a fine Razor having pared it ſmooth on the outſide, cut it into the faſhion of a long Katherine Pear, big and round at the one end, and long and ſlender at the other, and according to the ſtrength of your line, ſo make your work bigger or leſſer, as for a line of three hairs, a cork of an inch and half in length, and as much in compaſſe in the thickeſt part, is big enough: and for a line of more hairs, a cork of more length and compaſſe will become it: and indeed to ſpeak truly, forasmuch as it ſerveth but only for a direction to your eye, to know when the fiſh biteth, and when you ſhall ſtrike; the leſſer your Cork is, the better it is, and breedeth leſſe afright in the water, inſomuch, that many Anglers will fiſh without any cork, with a bare quill only, but that it is not ſo certain, nor giveth ſo ſure direction as the cork doth. After you have ſhaped your cork, you ſhall with a hot iron boar a hole long-wiſe, through the midſt thereof, and into that hole, thruſt a quill, and through the quill draw your line, and faſten them both together with a wedge of the hard end of the gooſe feather: and note that both your quil and your wedge be white, for that breedeth leaſt offence on the water; then place the ſmaller end of your cork down toward your hook, and the bigger end toward your rod that the ſmaller end ſinking down with the hook, the bigger may float aloft and bear the quill upward, which when at any time you ſee or perceive pull'd down into the water, then you may ſafely ſtrike for without doubt it is an aſſured ſign that the fiſh hath bitten at the bait. Of the Cork.

Their be other Anglers which make their corks in the faſhion of a Nunne gig, ſmall at both ends, and big in the midſt, and it is not much to be diſliked, only it is a little ſooner apt to ſink, and you may thereby ſtrike before the fiſh have full bitten. Others ſhape their corks in the faſhion of a whirle, or of a little apple, round, flattiſh of both ſides, and this cork is beſt to Angle for the greateſt Fiſhes, becauſe it being not ſo apt to

ſink, will float till the hook be faſtned, and that the Fiſh begin-neth to ſhoot away with the bait, ſo that a man then ſtriking can ſeldome or never looſe his labour.

Of Angling hooks.

Next to your Corks, is your hooks, and they be of divers ſhapes and faſhions, ſome big, ſome little, ſome between both, according to the Fiſh at which you angle: the beſt ſubſtance whereof to make them, is, either old Spaniſh needles, or elſe ſtrong wier drawn as near as may be to that height of temper, which being nealed and allaid in the fire, you may bend and bow at your pleaſure. Now for the beſt ſoftning of your wier, if you make your hooks of old needles, you ſhall need but coo hold them in the blaze of a candle till they be red hot, and then let them cool of themſelves, and they will be ſoft and pliand enough; but if you make your hooks of ſtrong Spaniſh wier, you ſhall roule it round, and lay it upon burning charcoales, turning it up and down till it be all red hot in every place, then let it gently coole of it ſelfe, and it will be ſoft enough. Now for the making of your hooks, I adviſe you to go to ſuch as are beſt reputed for making of them, and buy of all ſorts from the biggeſt to the leaſt, that is to ſay, from that which taketh the Loach, to that which taketh the Salmon; and let them lie before you for examples: then look of what ſorts of hooks you intend to make, and with a fine File, firſt make the point of your hook, which would neither be too ſharp, for then it will catch hold of every thing, when it ſhould not, nor too blunt, leſt it faile to take hold when there is occaſion: therefore in that obſerve a mean, making it leſſe then a fine needle, and more ſharp then a ſmall Pinne. When you have made the point, then with a thin knife of a very good edge, you ſhall cut out and raiſe up the beard, which you ſhall make greater or leſſe, according to the bigneſſe of the hook, and the ſtrength of the wier: for you muſt by no means cut the beard ſo deep, that thereby you weaken the hook, but it muſt be as ſtrong in that place as any other. When the point and beard is made, you ſhall with a fine pair of round plyers, turn and compaſſe the hook about, making it round, circular-wiſe, being

being ſomewhat more then a ſemicircle, and ever obſerve that the rounder the compaſſe or bout commeth in, that ſo much the better proportioned the hook is. This done, you ſhall leave as much as you think convenient for the ſhank, and then cut it off from the reſt of the wier: which done you ſhall beat the end down flat, and ſomewhat broader then the reſt, and ſo polliſh and ſmooth it all over, then heating it red hot in a little pan of Charcoals, put it ſuddainly into the water, and quench it, which will bring your hook to a full ſtrength and hardneſs. Thus you ſee how to make hooks of all ſizes and ſhapes, whether they be ſingle or double hooks, for although the quantities alter, yet the ſhapes do not; and the double hook, which is the Pike-hook, is no other, but two ſingle hooks all of one wier turned contrary waies, and this double hook muſt not have the line fixt unto it, but a ſtrong wier joined unto it, of three inches long, well wound, and wrapped with a ſmaller wier: then add to it another wier of the ſame length, as if they were two ſeverall links joined together, and then the line fixed to the laſt link; and therefore are called armed hooks, for they defend the line from ſhearing or cutting in pieces with the teeth of the Pike.

Now for your ſingle hooks, you ſhall thus fix them unto your lines, take a length of your twiſted haires, containing that number which is fit for the hook, and havidg made a ſtrong loop at the one end, lay the other end where there is no bout, upon the inſide of your hook; then with a ſtrong red ſilk, either ſingle or double, according to the bigneſſe of the hook, being well waxed, whip and wrap the hook round about, as thick, cloſe, and ſtrait, as may be, in ſuch ſort as you ſee men whip their Bow ſtrings, and in the ſame manner make the ends of your ſilk faſt; then with a pair of ſizers, cut the ſilk and hairs off cloſe by the hook, and you may be ſure that they will not looſe one from another, with reaſonable violence.

After your hook is thus faſtned to your line, you ſhall then plumb your line, which is to fix certain pieces of lead, according to the bigneſſe of your line about it, ſome being in length a quarter of an inch, ſome bigger, and ſome leſſe, according unto

ſink, will float till the hook be faſtned, and that the Fiſh begin-neth to ſhoot away with the bait, ſo that a man then ſtriking can ſeldome or never looſe his labour.

Of Angling hooks.

Next to your Corks, is your hooks, and they be of divers ſhapes and faſhions, ſome big, ſome little, ſome between both, according to the Fiſh at which you angle: the beſt ſubſtance whereof to make them, is, either old Spaniſh needles, or elſe ſtrong wier drawn as near as may be to that height of temper, which being nealed and allaid in the fire, you may bend and bow at your pleaſure. Now for the beſt ſoftning of your wier, if you make your hooks of old needles, you ſhall need but too hold them in the blaze of a candle till they be red hot, and then let them cool of themſelves, and they will be ſofe and pliand enough; but if you make your hooks of ſtrong Spaniſh wier, you ſhall roule it round, and lay it upon burning charcoales, turning it up and down till it be all red hot in every place, then let it gently coole of it ſelfe, and it will be ſoft enough. Now for the making of your hooks, I adviſe you to go to ſuch as are beſt reputed for making of them, and buy of all ſorts from the biggeſt to the leaſt, that is to ſay, from that which taketh the Loach, to that which taketh the Salmon; and let them lie before you for examples: then look of what ſorts of hooks you intend to make, and with a fine File, firſt make the point of your hook, which would neither be too ſharp, for then it will catch hold of every thing, when it ſhould not, nor too blunt, leſt it faile to take hold when there is occaſion: therefore in that obſerve a mean, making it leſſe then a fine needle, and more ſharp then a ſmall Pinne. When you have made the point, then with a thin kniſe of a very good edge, you ſhall cut out and raiſe up the beard, which you ſhall make greater or leſſe, according to the bigneſſe of the hook, and the ſtrength of the wier; for you muſt by no means cut the beard ſo deep, that thereby you weaken the hook, but it muſt be as ſtrong in that place as any other. When the point and beard is made, you ſhall with a fine pair of round plyers, turn and compaſſe the hook about, making it round, circular-wiſe, being

being ſomewhat more then a ſemicircle, and ever obſerve that the rounder the compaſſe or bout commeth in, that ſo much the better proportioned the hook is. This done, you ſhall leave as much as you think convenient for the ſhank, and then cut it off from the reſt of the wier: which done you ſhall beat the end down flat, and ſomewhat broader then the reſt, and ſo polliſh and ſmooth it all over, then heating it red hot in a little pan of Charcoals, put it ſuddainly into the water, and quench it, which will bring your hook to a full ſtrength and hardneſs. Thus you ſee how to make hooks of all ſizes and ſhapes, whether they be ſingle or double hooks, for although the quantities alter, yet the ſhapes do not; and the double hook, which is the Pike-hook, is no other, but two ſingle hooks all of one wier turned contrary waies, and this double hook muſt not have the line fixt unto it, but a ſtrong wier joined unto it, of three inches long, well wound, and wrapped with a ſmaller wier: then add to it another wier of the ſame length, as if they were two ſeverall links joined together, and then the line fixed to the laſt link; and therefore are called armed hooks, for they defend the line from ſhearing or cutting in pieces with the teeth of the Pike.

Now for your ſingle hooks, you ſhall thus fix them unto your lines, take a length of your twiſted haires, containing that number which is fit for the hook, and havidg made a ſtrong loop at the one end, lay the other end where there is no bout, upon the inſide of your hook; then with a ſtrong red ſilk, either ſingle or double, according to the bigneſſe of the hook, being well waxed, whip and wrap the hook round about, as thick, cloſe, and ſtrait, as may be, in ſuch ſort as you ſee men whip their Bow ſtrings, and in the ſame manner make the ends of your ſilk faſt; then with a pair of ſizers, cut the ſilk and hairs off cloſe by the hook, and you may be ſure that they will not looſe one from another, with reaſonable violence.

After your hook is thus faſtned to your line, you ſhall then plumb your line, which is to fix certain pieces of lead, according to the bigneſſe of your line about it, ſome being in length a quarter of an inch, ſome bigger, and ſome leſſe, according unto

the weight of your hook, and bigneſſe of your cork, for theſe plummets are but only to carry down your hook, and lay it in the bottom, neither being ſo heavy to make the cork ſink, nor ſo light, as not with the ſmalleſt touch to make the cork dip into the water; you ſhall then underſtand, that your firſt plummet would be twelve or fourteen inches from the hook, the reſt not above one inch diſtance one from another, not being above five or ſeven at moſt, albeit ſome Anglers uſe nine, and ſome more, as their fancies rule them. There is in plumbing of lines, three ſeveral faſhions of plummets uſed, as one long, another ſquare, and the third in a Diamond form, but all tending to one end, have but one uſe, and the long ones are accounted the beſt, ſo that they be neatly ſet to, and the end very ſmooth and cloſe laid down, ſo that they tangle not the line by catching hold upon weeds, or other traſh in the bottome of the water.

Of other implements for Angles.

Thus have you ſeen the beſt choice of Rods, Lines, Corks, and Hooks, and how to fix and couple them altogether to do their ſeveral Offices; it now reſteth that we ſpeak of other neceſſary implements, which ſhould accompany the painful and induſtrious Angler, and they be theſe: He ſhall beſides theſe before ſpoken of, have a large musket-bullet, through which having fixed a double twiſted thread, and thereof made a ſtrong loop he may at his pleaſure hang it upon his hook, and therewith ſound the dep h of every water, and ſo know how to plumb his lines, and place his cork in their due places; then he ſhall have a large ring of lead, ſix inches at leaſt in compaſſe, and made faſt to a ſmall long line, through which thruſting your Angle rod, and letting it fall into the water by your hair line, it will help to unlooſe your hook if it be faſtned either upon weed, or other ſtones in the water.

Then he ſhall have a fine ſmooth board, of ſome curious wood for ſhew ſake, being as big as a trencher, and cut battlement-wiſe at each end, on which he ſhall fold his ſeveral lines. His hooks he ſhall have in a dry cloſe box, he ſhall have a little bag of red cloath, to carry his worms in, and mixt with them a little freſh mould and Fennell: then he ſhall either have a cloſe ſtopt horn, in which he ſhall keep Maggots, Bobbes, Palmers,

mers, and ſuch like, or a hollow cane, in which he may put them, and Scarrabs: He ſhall have a cloſe box for all ſorts of live flies, and another for needles, ſilke, thread, Wax, and other looſe hairs; then a roul of pitch thread to mend the Angle rod withall, if it chance to break, a file, a knife, a pouch with many purſes, in which you may place all your implements whatſoever ſeverally.

Laſtly, he ſhall have a little fine wanded Peppe to hang by his ſide, in which he ſhall put the fiſh he catcheth; and a ſmall round net faſtned unto a poles end, wherewith he may land a Pike, or any other great fiſh of that kind whatſoever. To have alſo a little boat or Cot, if you Angle in great waters, to carry you up and down, to the moſt convenienteſt places for your paſtime, is alſo right neceſſary, and fit for an Angler; and thus I have ſhewed you the ſubſtance of the Anglers inſtrument.

CHAP. II.

Of the Anglers Apparell, and inward Qualities.

TOuching the Anglers apparel (for it is a reſpect as neceſſary as any other whatſoever) it would by no means be gariſh, light coloured, or ſhining, for whatſoever with a glittering hew reflecteth upon the water, immediately it frighteth the fiſh, and maketh them flie from his preſence; no hunger being able to tempt them to bite, when their eye is offended; and of all creatures there is none more ſharp ſighted then Fiſhes are.

Anglers apparel.

Let then your apparel be plain and comely; of a dark colour as Ruſſet, Tawny, or ſuch like, cloſe to your body, without any new faſhioned flaſhes, or hanging ſleeves, waving looſe, like ſails about you, for they are like blinks, which will ever chaſe your game from you: let it, for your own health and eaſe ſake, be warm and well lined, that neither the coldneſſe of the air, nor the moiſtneſſe of the water may offend you: keep your head and feet dry, for from the offence of them ſpringeth Agues, and worſe infirmities.

Anglers vertues.

Now for the inward qualities of the minde, albeit ſome Writers

Writers reduce them to twelve heads, which indeed whosoever enjoyeth, cannot chuse but be very compleat in much perfection, yet I must draw them into many more branches. The first, and most especiall whereof, is, that a skilfull angler ought to be a generall Scholler, and seen in all the Liberall Sciences, as a Grammarian, to know how either to Write or Discourse of his art in true and fitting terms, either without affectation or rudenesse. Hee should have sweetnesse of speech, to perswade and intice others to delight in an Exercise so much laudable. He should have strength of arguments to defend and maintain his profession, against envy or slaunder. He should have knowledge in the Sunne, Moon, and Starre, that by their aspects, he may guesse the seasonablenesse, or unseasonablenesse of the weather, the breeding of storms, and from what coasts the winds are ever delivered. Hee should be a good knower of Countries, and well used to high-waies, that by taking the readiest paths to every Lake, Brook, or River, his journies may be more certain, and lesse wearisome. He should have knowledge in proportions of all sorts, whether Circular, Square, or Diametricall, that when he shall be questioned of his diurnall progresses, he may give a Geographicall description of the angles and channels of Rivers, how they fall from their heads, and what compasses they fetch in their severall windings. He must also have the perfect art of numbring, that in the sounding of Lakes or Rivers, he may know how many foot or inches each severally containeth; and by adding, substracting, or multiplying the same, he may yeeld the reason of every Rivers swift or slow current. He should not be unskilfull in Musick, that whensoever either melancholly, heavinesse of his thought, or the perturbations of his own fancies, stirreth up sadnesse in him, he may remove the same with some godly Hymne or Anthem, of which *David* gives him ample examples.

He must be of a well setled and constant beliefe, to enjoy the benefit of his Expectation; for than to despair, it were better never to be put in practise: And he must ever think where the waters are pleasant, and any thing likely, that there the Creator of all good things hath stored up much of his plenty, and

and though your ſatisfaction be not as ready as your wiſhes, yet you muſt hope ſtill, that with perſeverance you ſhall reap the fulneſs of your harveſt with contentment. Then he muſt be full of love both to his Pleaſure and to his Neighbour: To his pleaſure; which otherwiſe will be irkſome and tedious; and to his Neighbour, that he neither give offence in any particular, nor be guilty of any general deſtruction: then he muſt be exceeding patient, and neither vex nor excruciate himſelf with loſſes or miſchances, as in loſing the prey when it is almoſt in the hand, or by breaking his Tools by ignorance or negligence, but with a pleaſed ſufferance amend errors, and think miſchances inſtructions to better carefulneſs.

He muſt then be full of humble thoughts, not diſdayning when occaſion commands to kneel, lye down, or wet his feet or fingers, as oft as there is any advantage given thereby, unto the gaining the end of his labour. Then muſt he be ſtrong and valiant, neither to be amazed with ſtormes, not affrighted with Thunder, but to hold them according to their natural cauſes, and the pleaſure of the higheſt: neither muſt he, like the Fox which preyeth upon Lambes, imploy all his Labour againſt the ſmaller Frey: But like the Lyon that ſeazeth Elephants, think the greateſt Fiſh which ſwimmeth, a reward little enough for the pains which he indureth. Then muſt he be liberal, and not working only for his own belly, as if it could never be ſatisfied; but he muſt with much cheerfulneſſe beſtow the fruits of his skill amongſt his honeſt neighbours, who being partners of his gain, will doubly renown his triumph, and that is ever a pleaſing reward to vertue.

Then muſt he be prudent, that apprehending the Reaſons why the Fiſh will not bite, and all other caſual impediments which hinder his ſport, and knowing the Remedies for the ſame he may direct his labours to be without troubleſomeneſs. Then he muſt have a moderate contentation of the mind to be ſatisfied with indifferent things, and not out of any avaritious greedineſs think every thing too little, be it never ſo abundant. Then muſt he be of a thankfull nature, praiſing the Author of all goodneſſe, and ſhewing a large gratefulneſſe for the leaſt ſatisfaction.

Then must he be of a perfect memory, quick and prompt to call into his mind all the needfull things which are any way in this exercise to be imployed, lest by omission or by forgetfulnesse of any, hee frustrate his hopes, and make his labour effectlesse. Lastly, he must be of a strong constitution of body, able to endure much fasting, and not of a gnawing stomack, observing hours, in which if it be unsatisfied, it troubleth both the mind and body, and loseth that delight which maketh the pastime only pleasing.

Cautions. Thus having shewed the inward Vertues and qualities which should alwayes accompany a perfect Angler, it is very meet now to give unto you certain Cautions, which being carefully observed, you shall with more ease obtain the fulnes of your desires. First therefore, when you go to Angle, you shall observe that all your Tooles, Lines, or implements be (as the Seaman saith) yare, fit, and ready; for to have them ravel'd, ill made or in unreadinesse, they are great hindrances unto your pleasure. Then look that your baits be good, sweet, fine and agreeing with the season: for if they be otherwise unproper in any of their natures, they are useles, and you had better been at home then by the River. Then you must not Angle in unseasonable times, for the Fish being not inclined to bite, it is a strange inticement that can compel them. Then you must be carefull neither by your apparrel, motions, or too open standing to give affright to the Fish, for when they are scared they flye from you, and you seek society in an empty house. Then must you labour in clear and untroubled waters, for when the Brooks are any thing white, muddy and thick either through inundations or other trouble, it is impossible to get any thing with the Angle: Then, to respect the temper of the weather, for extream wind or extream cold taketh away all manner of appetite from fish: So doth likewise to violent heat, or rain that is great, heavy, and beating, or any storms, Snows, haile, or blustrings, especially that which commeth from the East, which of all is the worst. Those which blow from the South are best, and those which come from the North or West are indifferent: Many other observations there are, but they shall follow in their due places.

CHAP.

CHAP. XII.

Of the beſt and worſt Seaſons to Angle in, and their Uſes.

BEfore I direct you in the beſt Seaſons, and their contrary, for the generall Art of Angling, I think it not amiſs, a little by the way, to give you a glance or ſpeculation how to ordure your Body and Art of each ſeverall water: for the manner of your ſtanding and concealing of your ſelf is a material and chief point in this Art.

The Anglers manner of ſtanding.

Know then, that if you Angle in any Pond or ſtanding water, you ſhall before you fall to your buſineſſe, with your Plumbe, ſound the Water in divers places, and where you find it deepeſt, blackeſt, and leaſt tranſparent, there you ſhall ſtand to Angle, placing your ſelf under the bank, and if it be poſſible, ſo as your ſhadow may be carried from the water; For you muſt at no time, if you can chuſe, let your ſhadow lye upon the water: and although in theſe deep places your ſtanding open or cloſe, are either of them reckoned indifferent becauſe the waters depth is a ſufficient concealment, yet the cloſer you ſtand is accounted amongſt Anglers moſt handſome and artificial.

But if you goe to Angle at the River, then the beſt place to caſt in your Line, is, where it is deepeſt and cleereſt, ſo as you may behold the Sand or Gravell at the bottome: and in theſe places you ſhall ſtrive to conceal your ſelf as much as poſſible, as ſtanding behind Poplars, Oziers, or other Trees, or under the covert of ſome Bank, Rock, or other ruines at the ſide of the River: alſo in covert places, where are many Weeds Roots of Trees, and other rubbiſh, is good Angling, but very troubleſome: for fiſh lying there warm and in ſafety, will have a great reſort thereunto, and bite freely, ſo that the Angler muſt be carefull in the putting in of his hook, and very deliberate in ſtriking, leaſt doing any thing raſhly, he break his Line and hook, being never ſo little intangled.

It is good alſo to Angle in Whirle-pools, for they being like pits within the Rivers, are ſeldome unfurniſhed of the greateſt Fiſhes; alſo, it is good to Angle at the falls of water, as

under Bridges, ſtanding behind the Jawmes and Arches, or at the flood gates of Mills, being hid with the higher Timbers. And generally where you ſee the water is deepeſt, cleareſt, and calmeſt, being leaſt troubled with wind or weather, is the fitteſt place to angle in. Other obſervations there are, but they will follow in more neceſſary places.

The beſt ſeaſon to Angle in.

To return then to our firſt purpoſe. You ſhall know the beſt ſeaſon to Angle in, is from April to the end of October, ſpeaking of the general uſe of the pleaſure; and the beſt hours alſo in general account, are from four in the morning till nine, and from three in the afternoon till after five in the Evening, the wind blowing from South, Weſt, or North, and the ayr temperate, inclined to warmneſs; but to ſpeak of particular obſervations of ſeaſons, know that if the day be dark, cloſe and lowring, or have a gentle whiſtling wind playing upon the water, it is good to Angle in, and the Fiſh will bite with pleaſure: Nay, if a fine mizling dew of rain fall gently, without violence, they will then bite the faſter: alſo after floods are gone away, and the Rivers are come within their own banks, the firſt cleerneſſe recovered, and the water pure, then it is good to angle. And generally for your Summer angling, chuſe the cooleſt time of the day, for in the heat of the day Fiſh betake themſelves to their reſt, and will neither bite nor play.

But for your Winter Angling, which is from October to April; you ſhall not make any difference of time, if the weather be calme, for all hours of the Sun are alike, onely the noon-tide or mid-day is moſt preferred, eſpecially in Ponds and ſtanding water. If the water where you Angle, ebbe or flow, the beſt time of Angling, is held to be in the ebbe: yet in ſome places, where the tide is not great, there the flood is preferred. Laſtly, whenſoever you ſee the Trout play or leap above the water, and the Pike ſhut in purſuit of other fiſhes, it is then a very good time to Angle in uſing ſuch baits as are then meet for the month and ſeaſon, as ſhall be ſhewed hereafter.

Seaſons iſt to Angle in.

Now for thoſe ſeaſons which are naught to angle in, there is none worſe than in the violent heat of the day, or when the Winds are loudeſt, Rain heavieſt, Snow and Hail extreameſt: Thunder and Lightning are offenſive, or any ſharp ayr, which flyeth

flyeth from the East: the places where men uſe to waſh Sheep you ſhall forbear, for the very ſmell of the Wool will chaſe fiſh from their haunts, Land floods are enemies to anglers, ſo alſo at the fall of the leaf is the ſhedding of leaves into the water, & many other ſuch like pollutions, of which we will ſpeak ſomething more hereafter.

Of Fiſhes Haunts.

Therefore, to conclude this Chapter; and to ſhew you as well how to find your fiſh, as the Art to take it being found, you ſhall know that the Carp, Ele, and Tench do ever haunt muddy places: the firſt, which is the Carp, lyeth ever in the depth and bottome thereof: the Tench, among the weeds and roots of Sedges, and the Eele under ſtones, blocks, or the Roots of Trees.

The Bream, the Chevin, and the Pike, haunt ever in the cleer and ſandy bottome: the Pike where you ſee great ſtore of ſmall fry; the Chevin where the ſtream runneth ſwifteſt, and the ſhade is greateſt; and the Bream where the water is broadeſt, and the depth giveth greateſt liberty; and generally theſe three ſorts of fiſh delight more in ſtanding waters then in running Rivers: although the ancient Proverb is,

Ancome Eele, and Witham Pike,
In all England is none ſike.

which are Rivers in *Lincoln-ſhire*. Now the Salmon hath his haunt in the ſwifteſt and broadeſt Rivers, whoſe Channels fall down into the Sea: The Trout loveth ſmaller brooks, whoſe current is ſwift, clear, gravelly, and ever hath his lodging in the deepeſt holes that are therein; and the Perch haunteth Rivers of the ſame nature, only he abideth moſt in creeks and hollowneſſes, which are about the bank; and indeed theſe three Fiſhes generally, Salmon, Trout and Perch, love clear ſtreames, being green with weeds, and the bottomes hard with gravel and pibble.

The Gudgeon, the Loach, and the Bulhead, haunt ever ſhalloweſt places, and where ſtreams are flow yet tranſparent; The Barbel, Roch, Dace, & Ruff, haunt the deep ſhady places of thoſe brooks which are mixt with more ſand than gravell, or where the clay is firm and not ſlimy, and delight ever to lye under the ſha-

ſhadows of Trees, brambles or other things growing from the banke.

The Luce or Lucern, which indeed is but the over-grown Pike, haunteth the broad and large Meares, which are miles in compaſſe, being deep and ſtill, and ever lodgeth in the bottome thereof amongſt the Roots and Tufts of Sedge, and bulruſhes, being quiet and leaſt troubled. The Humber haunts the clayie Rivers of High Countries: where the ſoyle is Rich and full of Marle, or in Lakes or ponds of the ſame nature. The Shad and Tweat, haunt thoſe waters which are brackiſh deep, and accuſtomed to ebb and flow: and where they haunt, there commonly alſo is found both the Mullet and Suant: all which love to lodge cloſe and flat at the bottome of the water, ſo it be more Oore than gravel.

Objection. But here now methinks, I heare the curious reprehend me, ſaying, that if theſe Rules ſhould be infallible, that then no River or Pond could not contain above three ſorts of Fiſh only, when dayly Experience ſheweth us, that ſome Rivers have ten, ſome twenty, and ſome thirty, as the Trent for example, whoſe antient name in French is *Trianta*, in Latine *Triginta*, and in Engliſh *Thirty*, derived from this ground becauſe there ſtandeth upon her, thirty Caſtles, thirty Market Towns, and are in her thirty ſeverall ſorts of fiſhes.

Anſwer. To which I thus anſwer, that for as much as into moſt Rivers falleth many ſeverall waters and many ſoiles, according unto the nature of thoſe Countries through which the Channels runne, that therefore every alteration of ſoyl may alter the breed of Fry, and many ſeverall kinds may be in one Stream, ſo that the Angler in the choice of his paſtime in ſuch places, muſt either have a perfect knowledge how the ſoyles doe alter (which he may commonly know by the banke,) or elſe rely upon his experience, which will be the beſt Tutor to direct him unto the haunts of ſeverall fiſhes; but for ponds or ſtanding waters which are of one earth, there you ſhall ſurely find them beſt proſper, which are before rehearſed.

CHAP.

CHAP. XIII.

Of Baits in general, and of every particular kind: their Seasons, Use and preservations.

SInce I have thus far orderly passed over the outward and instrumental necessaries appertaining to this modest Recreation, shewing the several tooles and implements which are to be imployed therein, and have also shewed the inward and mental knowledge which should be harboured in his breast that will be an Angler; I will now proceed to speak of the Baites and inticements, which are the Agents and effecters of our desires in this pastimes, without which all other implements are vain and useless: for what doth it availe to have all other things in imperfection, when this, which is the strength and life of the rest, is either imperfect or defective?

To speak then generally of baites, they are divided into three kinds, which are, Life-baits, dead baits, and baits living but in appearance only. Your life-baits are worms of all kinds, especially the Red-worm, the Maggot, the Bobb, the Dor, Brown-flyes, Frogs, Grashoppers, Hornets, Wasps, Bees, Snails, small Roches Bleaks, Gudgeons, or Loches. You dead baits are pasts of all makings, your brood of Wasps, dryed or undryed, the clotted bloud of Sheep, Cheese, Bramble-berries, Corn, Seeds; Cherries, and such likg. And your baits which seem to live, yet are dead, are flyes artificially made of all sorts and shapes, made of silke and feathers about your hooks, which will serve for every several season through the year, and being by your Line moved upon the water, seem to be live flyes, which the Fish with great greedines will catch up and devour.

Seasons. Now for the season in which these baites are most profitable, you shall understand that the Red worm will serve for small fish all the year long; the Maggot is good in July, the Bobb and Dor in May, the brown flyes in June, Froggs in March, Grashoppers in September, Hornets in July, Wasps and Bees in July, Snails in August, for the Roch, Bleak or Gudgeon, they serve the Pikes at any season: all Pastes are good in May, June, and July; dryed Wasps in May: Sheeps bloud and Cheese in April.

Of Flyes.

April: for Bramble-berries, Corn and ſeeds, they are good at the fall of the Leaf. Laſtly, for your dead flyes, which are moſt proper for the Trout or Graveling, you ſhall know that the Dun Flye is good in March being the leſſer, but the greater Dun Fly will ſerve the latter end of February: the Stone flye is good in April, the Red flye, and Yellow Fly in May; the Black flye, the dark Yellow flye, and the Mooriſh flye in June; the Tawny Fly part in May, and part of June, the Waſp flye, and the ſhell flye in July, and the clowdy dark flye in Auguſt.

The making of Flyes.

Now for the making of theſe flyes, the cloudy dark flye is made of black woole, clipt from between a Sheeps Eares, and whipt about with a black ſilk, his wings of the under maile of the Marlard and his head made black and ſuitable, fixed upon a fine piece of Cork, and folded ſo cunningly about the hook, that nothing may be perceived but the point and beard onely. The ſhel flye is made of fine greene Floxe, and the wings of the wings of a Pew-glead: the Waſp Flye is made of Black Wool, lapt about with yellow ſilke, and the wings of the down of a Buzzard; the Tawny flye is made of tawny wool, and the wings ſet on contrary to another, and made of the white down of a Widgeon: the mooriſh flye is made of fine flocks ſhorne from a freeſe-gray Ruſſet, and the wings of a Drake: the bright yellow flye is made of yellow wool, and his wings of a Red Cocks yellow main: the ſad yellow flye is made of black wool, with a twiſted yellow ſilk, like a liſt, whipt down on either ſide, and the wings of the wings of a Buzzard, ſet on with black thread: the black flye is made of black wool, and lapt about with the herle of a Peacocks tayl, his wings with the brown feathers of the Mallard, and ſome of his Blew feathers on his head: the Red flye is made of Red wool, lapt about with black ſilk, and the wings of the Mail of a Mallard, with ſome of the feathers of a Capon: the Stone flye is made of black wool made yellow under the wings, and under the tayl with ſilk, and the wings of Drakes down: the greateſt Dun flye is made of black wool, and his wings of the Dun feathers of a Drakes tayle; the leſſer Dun flye is made of dun wool, and his wings of the mail of a Partridge.

Now for the ſhapes and proportions of theſe Flyes, it is impoſſible to deſcribe them without Painting, therefore you ſhall take

of these several flies alive, and laying them before you, try how neer your art can come unto nature, by an equal shape and mixture of colours; and when you have made them, you may keep them in close boxes uncrushed, and they wil serve you many yeers.

Now for the preservation and keeping of your quick baits (for longer then they are neat and sweet they are not good) you shall understand, that they must not be kept altogether, but every kind several by it selfe, and nourished with such comforts, as it delighteth in, when it is at liberty, or with such things as they breed in or upon, when they are first taken. And first for the Red worme: when you take them, you shall put them in a bag of red cloath, and chopping a handfull of Fennell, mixe it with halfe so much fresh mould being black and fertile, and they will both live and scour therein. There be some anglers which put wet mosse both under and above them: Others there be, which put Parsly or sweet Marjoram unto them, but the former way is the best, so you observe every night to renew their earth, or once in two dayes to refresh them with a little new Oxe-dung; and thus you may keep them two months without imperfection. For the great white maggots, you shall mix with them sheeps tallow, or little bits of a beasts liver; the best way to scour them, is to put them into a bag of blanketting, with sand; and hang them where they may have the air of the fire, or other warmth, for the space of an hour or two. For Frogs and Grashoppers, you shall keep them in wet mosse, and long grasse, moistned every night in water; and when you angle with them, you shall cut off their legs by the knees, and the Grashoppers wings neer unto the body; for other worms, as the Bob, Cadis worm, Canker, and such like, you shall keep them with the same things you find upon them; and for all five flies, you shall use them as you take them, only the Wasp, the Hornet, and Humble-Bee, which is without sting, you shall first dry them a little in a warm oven after the bread is drawn, and then dip all their head into sheeps blood, and then dry them again, and so keep them in a close box, and they will continue two or three months in all good perfection. Preservation of Baits.

Now lastly, to speak of your made baits, which are pastes, the most of them will last the whole year, and as they be di- Of making pastes.

vers, ſo I will ſhew you how to compound every one of them in his true and perfect nature. Firſt, to make paſtes that ſhall laſt longeſt; you ſhall take Bean flower, and thoſe parts of the Conies leg, which is called the Almond of the Coney, or if it be of a fat young Whelp, or a Cat, it is as good: and to theſe put alike quantity of Virgin Waxe, and ſheeps ſuet, and then beat them together in a morter, untill they be made one body, then with a little clarified honey, temper it before the fire, and ſo make it up in round bals, and it will laſt all the year: and the uſe thereof is, when you angle, to bait your hook therewith, and not any Fiſh which ſwimmeth in freſh waters, but will greedily bite thereat.

There is alſo another paſte which is of equal quality and uſe with this, and will laſt as long, and that is, to take the Kidney-tallow of a ſheep, and as much young Cheeſe, and beat them in a mortar till they be one body, then add to them as much wheate flower, as will bring it to an exceeding ſtiffe paſte, then knead it before the fire, and allay the ſtiffneſſe with life-honey, and ſo make it up into bals.

The uſe of this paſte is like the former. Take the blood of a Sheep, and of honey, like quantity, and beat them together with a lump of freſh cheeſe, then with the fine grated crums of white bread, work them into a ſtiff paſte, and ſo role it up in bals; and when you angle, do not bait your hook therewith, but now and then caſt little pellets thereof into the water, and it will intice the fiſh to reſort unto you, and to bite with great greedineſſe.

There be others which take bread crums, and beat them in a Mortar with ripe Cherries (the ſtones being taken out) untill it come to a ſtiffe paſte, and then knead it up into bals, and uſe it as you do that which was laſt recited: It is moſt approved, and very excellent for all ſorts of Fiſh in freſh waters.

Laſtly, if you take the oyle of the Aſpray, and Coculus Indiæ, and Aſſa fœtida beaten, and mixe with as much life-Honey, and then diſſolve them in the oile of Polypody, and ſo keep it in a cloſe glaſſe; then when you angle annoint your bait with this confection, and though the weather be never ſo unſeaſonable, or the fiſh never ſo ill diſpoſed to bite, yet be ſure you ſhall not

loſe

loſe your labour, but take when all men elſe faile of their purpoſe: for the ſecret hath been rarely approved, and hitherto hath been concealed with great ſecreſie. And thus much for baits, and their uſes.

CHAP. XIV.

Of angling for every ſeverall kind of Fiſh: according to their natures.

NOw to ſhew you how you ſhal angle moſt properly for every ſeveral Fiſh, with true art, according to the nature of the fiſh, I think it not amiſſe, firſt to begin with the Goodgin, Roch, and Dace, which being Fiſhes of eager bite, moſt fooliſh, leaſt afrightful, and ſooneſt deceived, are the firſt fitteſt preys for youug Schollers, and ſuch as are but learners in the art of Angling; for the eaſineſſe of their gaining, will not only ſettle an unreſolved mind, but give unto ignorance, both comfort and incouragement. Of the Goodgin, Roch and Dace.

If then you will angle for any of theſe ſmall Fiſhes in great ſtreams, it ſhall be meet to take a boat, and finding the places of their haunt, which is commonly in ſandy cleare waters, and where they run ſwifteſt, their angle for them with your ſmalleſt hooks, well headed, and ſmalleſt lines, well corke. Your hook would rather drag than be an inch from the bottome, and your beſt bait is the Red-worme, Cod-worme, Maggot, clotted blood of Sheep cut in little bits, or elſe the white ſpawn or brood of Waſps: and ever as ſoon as you ſee the cork ſtir, ſuddenly ſtrike, for they will lie nibling at the bait, and finding the hook forſake it. If you angle for them in ſmall brooks, you ſhall ſtand under bridges, at the falls of Mils, behind Poplars, or Oziers, or any where, where the ſtream runneth deep and ſwift. And ever note, that when your bite fails, you remove your place, and ſeek out a new ſtanding; and withall forget not ever when you angle for any of theſe fiſh, to caſt in ſome of your paſte before your hook, for this will make your ſport much more abundant: and although the Dace out of his own nature, biteth high, and neer the top of the water, yet theſe baits and intiſements will make him ſtoop, and be taken eaſily.

Of the Carps. If you will angle for the Carp, you muſt have a ſtrong Rod and a ſtrong Line, of at leaſt ſeven or nine hairs, and either mixt with green or watched ſilk, your cork muſt be large, long and ſmooth: your leads ſmooth and cloſe, and fixt neer the hook, and the hook almoſt of a three penny compaſſe. He is very dainty to bite, but at ſome ſpecial hours, as very early in the morning, or very late at night, and therefore he muſt be very much entiſed with paſte: his beſt baits are the Moſs-worm, the Red worm, or the Menow, for he ſeldome refuſeth them. The Cadis-worm is good for him in *June*, and the maggot, black worme, or Graſhopper, in *July*, *Auguſt* and *September*. If you make him paſte of ſour ale, white of egg, and bread-crums, it will very much entiſe him. Alſo I would ever wiſh you before you fiſh for the Carp, to caſt in a handful of white bread chippings into the Pond or River, for they will not only entice him to your bait, but alſo give you notice if you be neer his haunt, for you ſhall preſently hear him ſmack above the water; and then if you miſſe him, either your fortune or skill is not good.

Of the Chub, Chevin, or Trout. If you wil angle for the Chub, Chevin, or Trout, all your inſtruments muſt be ſtrong and good: your rod dark and diſcoloured, your line ſtrong, but ſmall and ſhort, your hook of a two-penny compaſſe: and if you angle with a flie, then nor lead, nor cork, nor quil; if otherwiſe, then all of a handſome and ſuitable proportion.

The beſt ſtanding to take them, is in cloſe and concealed places, as behind trees, wals, or arches of bridges: their haunes, are in clear waters which run upon ſand or gravel: and they are in beſt ſeaſon, from *March* till *Michaelmas*. If you angle for them with dead flies without lead, or cork, I have ſhewed you in the former Chapter, the ſeveral flies for each ſeverall month; but if you angle for them with other baits, then you muſt have both cork and lead, for he will bite near the bottome, yet ſometimes you may angle for him with a ſmall menow, hang'd at your hook by the neather parts, without cork or lead, and ſo draw the bait upon the top of the water; and both with it, and with every flie, ſtrike rather before than after he bites. If you angle for him at the ground, in *March*, *April*, *May*, and *Sep-*

September, the menow is good baite, ſo is the Stone-fly, Cadis-worm, Bob, Red worm, ditch canker, young frogs, the worm that breedeth on the Ozier leaſe, and the Dock-canker mixt together. In *June*, Crickets and Dore-flies are good: In *July* the Graſhopper is good, ſo is the Humble bee, dried Waſps, or dried Hornets, or any of their young brood in the combs: In *Auguſt*, flying Piſmires are good, ſo is the Colewort-worm, or the Maggot. And in *September*, either Cherries, Mice before they have any hair, or the great Sow-worm.

If you will angle for the Eele, the beſt place is at Wares, Mil-ponds, bridges, hollow banks, or any ſwift falling water: your Line ſtrong, and not above two els in length, and very heavily plumb'd, a good round hook, but no cork, becauſe you muſt not ſtrike till the Eele pluck: neither muſt you by any means pull haſtily, but holding your Line ſtiffe, with labour and Patience tire him, leſt that tearing his chaps, you loſe him. The beſt baite is the Red worme, or little pieces of ſheeps guts. Of the Eele.

The Flounder and Sewant are greedy biters, yet very crafty: for they will nibble and ſuck at a bait a good while before they ſwallow it, and if they perceive the hook, they will flie from it. Therefore to make them more haſty of the bait, you muſt ever be moving your line, and ſeldome let it lie ſtill. They lie moſt commonly in the deepeſt places of the River, where the water is ſtilleſt, and runneth with leaſt force. Alſo they lie near unto the bank, and delight moſt in the ſtream which is blackiſh, and mixt with the ſalt water. Your lines muſt be ſtrong, and well plumb'd near to the hook: and the beſt bait, is the Red worm, and the young brood of Waſps. Of the flounder and Sewant.

The Barbel or Greyling, which ſome call the Ember, are very ſubtile and crafty fiſhes: Therefore you muſt be very careful that your baits be ſweet and new, and when you angle for them, do in all things as you do for the Trout; for they bite aloft in the Summer, and at the bottome in the Winter. Your Lines muſt be extraordinary ſtrong, and your hooks of a three penny compaſſe, for they are fiſhes of weighty bodies, and when they are ſtruck, muſt have liberty to play and tire themſelves, or elſe they will indanger the breaking of your Rod, and therefore Of the Greyling or Barbel

your line must be of the longest size.

The best season to angle for the Bream, is from the latter end of *February*, till *September*: he is a very lusty strong fish; and therefore your tools must be good: the baits in which he most delighteth is, in worms of all sorts, Butter-flies, green flies, paste of bread crums, or the brood of Wasps.

Of the Tench. The Tench is a fish that ever loveth the bottome of Rivers, where the Ooze or mud is thickest; and is most fit to be angled for, in height of Summer, for at other season he is not apt to bite; and all times he is very dainty.

The baits in which he delighteth most, is pastes that are very sweet; and the browner the better, especially if it be made with the blood of a Sheep. At the great red worm also, he will bite; and so much the sooner, if you mixe them with this paste; the Maggot and dried Wasp, he will seldome refuse, chiefly being dipt in honey.

Of the Bleak, Ruffe, and Perch. The Bleak, Ruff, and Perch, are fishes which bite neither high nor low, but for the most part in the midst of the water therefore your line must be very lightly plumb'd, and far from the hook. The baits which most intice them, besides the red-worm, is the house-flie in the summer, and fat of bacon in the winter: in *April* they will bite well at the Bob-worm or Maggot, and in all other seasons, they seldome refuse any worm or canker. Your line would be small, and well armed from the hook a handful with small wier, for the teeth of the Perch will else gnaw it asunder.

Of the Pike. The Pike is a fish of great strength and weight, insomuch, that you can hardly have a line of hair to hold him; therefore your best Anglers use most commonly a Chaulk line: your angle-rod also must have no small top, but be all of one piece and bigness, and the line made exceeding fast from slipping. Your hook would be of the strongest wier, white or yellow, and made double, the points turning two contrary wayes, and then armed with strong wier a foot at least: his best bait is a little small Roch, Dace, or Menow, the hook being put in at the tail, and comming forth under the gils, and you must seldome or never let your bait lie still in water, but draw it up and down, as though the fish did move in the water, and fled from the Pike, for

for this will make him more eager and hasty to bite: and having bit, you must be sure to tyre him well before you take him up.

The yellow live Frog is also an excellent bait for the Pike, for you must understand, that they naturally delight not in any dead or unmoving food.

There be some which take a great deal of delight and pleasure to Snickle or halter the Pike, which is good when Pikes are broke out of Ponds or Rivers, and come into small Ditches or Rundles, as is oft to be seen in low-Countries. The way then to halter them, is, first to find the Pike where he lieth (which in the heat of the day, you may easily doe) then take your Chaulk-line, and making a large running nooze thereof, put it gently into the water, about two feet before the nose of the Pike, then when you feel it touch the ground, cause one to go behind the Pike, and with a pole to stir him, then as he shooteth, meeteth him with your nooze, and so with a sudden and quick jerk, throw him upon the land. In this sport you must be very ready, nimble, and quick sighted, for if you give him the least time, he will escape you. Of Snickling the Pike.

Now lastly, touching the angling for the Salmon, albeit he is a fish which in truth is unfit for your travell, both because he is too huge and cumbersome, as also in that he naturally delighteth to lie in the bottomes of great deep Rivers, and as near as may be in the midst of the channel, yet forasmuch as many men esteem that best which is got with most difficulty, you shall understand that the bait which he most delighteth, are those which serve for the Trout, as paste or flies in the Summer; and Red-worms, Bob-worms, or Cankers on the water-docks after *Michaelmas*. And thus much for the art of angling, and taking of each severall sort of fish which live in the fresh or brackish waters. Of the Salmon.

CHAP.

CHAP. XV.

Of taking Fiſh without Angles: and firſt of laying Hooks.

THe laying of hooks to take fiſh in the night, is moſt commonly uſed for the Pike, in great broad Waters or Meers, full of ſedges, bul-ruſhes, and other weeds, being very deep and muddy: Some do uſe to lay them for the Eele alſo, but you ſhall underſtand, that if you lay for the Pike, you muſt by no means let your hook go to the bottom, but with a float keep it half a foot from the ground, but if you lay for Eels, then let your hooks be ſmaller, and ſink as low as they will.

Now for the manner of laying them, you ſhall bait the hooks as you did when you angled, with Menow, Roch, Dace, Gudgen, or Millers thumb: and being made faſt to ſtrong pack-thread, faſten alſo that pack-thread to a ſtrong cord, which cord if it be three fadom in length, may hold ſixteen or twenty hooks. Then fixing two ſtrong ſtakes into the earth, faſten the two ends of the big cord to the two ſtakes, and ſo let it lie from Sun-ſet, untill Sun-riſe, and you ſhall never faile, but ſome of your hooks will have taken. Only obſerve if you lay for Pikes, to lay in the midſt of the water, neer unto the ſedge and weeds: but if you lay for eeles, lay very neer the banks, ſo there be no hollow or rotten trees growing thereon.

Now if you would with theſe laid hooks take any other ſort of Fiſh, you ſhall lay ſuch hooks as are fit for them: and before you depart away, caſt into the water good ſtore of pellets of thoſe paſtes which are proper for the fiſhes you would take: as the paſte which is made of bran, ſheeps blood, garlick, and lees of wine, will take all ſorts of ſmall fiſh: that paſte which is made of ſheeps liver, guts, hogs blood, bread crums, and Opoponaxe, will bring Perch, Tench, Carp, or Bream, unto your hooks, and that paſte which is only made of Rue, Pine-apple kernels, bean meal and hony, will bring the Salmon, the Trout, Chevin, or Barbels unto your hooks, at all times of the year.

CHAP.

CHAP. XVI.

Of preſerving Fiſh from all ſorts of Devourers.

AMongſt all the Ravenous Creatures which deſtroy Fiſh, there is none more greedy than the Otter, whoſe only food being thereon, hourly lyeth in wait to conſume them: Therefore though ſome Fiſher-men uſe to take them with a Wheel made with a double tunnel, and called by the name of the Otter-wheel, whoſe practice is ſo ordinary, that every Fiſher-man knows the uſe of the ſame; Yet for a more eaſie and ready way to deſtroy him, you ſhall as near as you can find out his haunt, and the holes that are in the bank, and under the Roots of Trees where he lodgeth, and then take a great Eele, and ſlitting her back above her navel, put in three or four lumps of *Arſnick*, and then ſtitch up the skin again, and ſo lay the Eele from the navel downward in the water, and from the navel upward out of the water: which when the Otter finds, it is his property to eat unto the navell, and no further, which if he do, it is certain that it is the laſt he will eat.

Next to the Otter, the Hern is a great devourer of Fiſh, eſpecially the ſmall frye, or that which lives in ſhallow places: Therefore to deſtroy the Hern, you ſhall take a ſtrong Barbell hook, and baite it, either with a Minow, or a peece of Doggs fleſh, colour your Line green, and lay it in a ſhallow place made faſt to ſome ſtake, where the Hern may wade to the knee to take it, and as ſoon as he hath ſwallowed, he ſhall no more go from the place.

Now, for as much as the Foul is a great deſtruction unto the young Spawn or Fry of Fiſh, it ſhall be good for the preſervation thereof, to ſtake down into the bottome of your Ponds good long Kids or Faggots of bruſh-wood, mixt with the boughs of green Willows, or Oziers, in which the Fiſh caſting their Spawn it will be a defence for them, till they be able to flye into better ſafety.

Next to the Hern the Water-Rat is a great deſtroyer of young

fiſh, eſpecially Trouts, Creviſſes, or any that lye in holes in the banks: the beſt way to deſtroy them is by hunting them with water Dogges which is a very good ſport, and I have ſeen twenty kild in an afternoon: but ſome do uſe to take them with hurches, or dead-falls, ſet in their haunts: but the former way is the better.

Next them, the Sea-pye, and Sea mew, is a great devourer or conſumer of Fiſh, and there is no better way to take him than by ſetting Rods dreſt with water Lime, and ſet ſtoring on the edge of the water, one gueſſe or row over another, in ſuch places as the Water is moſt ſhalloweſt; and upon ſome tufts of green Weeds, lay a fiſh for a bait under the Rods, at which he can no ſooner ſtrike, but he is preſently taken.

Next theſe the Kings Fiſher (which is a ſmall green bird) is a great deſtroyer of Fiſh, and the way to take him is to mark his haunt where he commonly ſitteth, which is ever in ſome buſh neer the River: then ſet a little Cradle of limed ſtraws about his ſeat, and they will quickly take him, for he ſeldome changeth, but ever ſitteth upon one bough.

Now to conclude, for the Cormorant, the More-hen, the bald coot, or the Oſpray, which deſtroy all kind of Fiſh whatſoever, there is no way better to kill them, then by watching their haunts, to ſhoot at them with a Fowling piece, and in the breeding time of the year to deſtroy their neſts.

CHAP. XVII.

Of the Ordering of Ponds, for the nouriſhment of Fiſh.

THere is nothing that killeth Fiſh, or maketh them to proſper worſe, than putrified and ſtinking waters: neither is there any thing which corrupteth water ſooner than weeds, Sedge, and ſuch filthineſſe, being ſuffered to grow therein; Therefore it ſhall be good once in three years for to cleanſe your Ponds of all manner of Weeds and Filth, which with a ſmall Boat and ſharp hook you may eaſily do at the fall of the leaſe, for to cut them in the Spring doth increaſe them. Now if your Ponds be much ſubject to mud, as for the moſt part thoſe in clay Coun-

Countryes are, then it ſhall be good once in ſeaven years to drain them, and lade them, and this would be done at the beginning of the Spring; and ſuch Fiſh as you are willing and mean to preſerve, you ſhall put into ſmaller pits or ſtews, and the other diſpoſe at your pleaſure: then cauſing the mud to be troden with mens feet as you tread morter, you ſhall ſee all the Eeles riſe aloft, which when you have taken alſo, then with ſhovels and trough Spades caſt out all the mud and filth (which is a ſingular compoſt for Land) upon the bank: then fodde the bottome of the Pond, and the ſides with green fodds and fix them hard into the Earth with ſmall ſtakes of Sallow, and theſe ſides will nouriſh the Fiſh exceedingly.

This done, if your Pond have not any freſh Spring in it, then you ſhall laid the water back again into it, and then draining your ſtews, take out your ſtore of Fiſh, and put them again into your Pond, obſerving ever that there be two parts, ſpawners; and but a third melters.

Theſe pits and ſmall ſtewes, howſoever others write to the contrary, are better for feeding of Fiſh, then breeding: therefore you ſhall ever keep them with freſh water, and placing ſo one by another, that you may empty them at pleaſure, once in three months renew their banks and bottomes with freſh foddes of the fruitfulleſt graſs; alſo, you ſhall put into them good ſtore of ſmall Fry of Roch Dace, Menow, Loch, and Miller-thumbes: for the bigger Fiſh will feed thereon: alſo the inward Garbage and blood of Sheep, Calves, Hoggs, and ſuch like, which will fat fiſh ſuddainly; for you muſt know that as the Fiſh in Rivers have by vertue of the current, ever ſomething brought to them to feed on, ſo the Fiſh which is impriſoned in Ponds and wants that help, muſt either be relieved or elſe periſh, and there is nothing better to feed them with, then that before ſpoken of, or elſe Brewers grains, chippings, curds, and any corne whatſoever, thrown into the Ponds, Morning and Evening.

CHAP. XVIII
Of the beſt Water-Lime.

THe beſt water Lime that can be made, and which will moſt ſurely hold within the water, is to take a pound of the ſtrongeſt Bird lime, and waſh it in nine running waters, untill there be no hardneſſe in it, and then beat out the water clean, and dry it. Which done, put it into an earthen pot, and adde thereto as much Capons Greaſe as will make it runne, two ſpoonfulls of ſtrong vinegar, a very little Lamp Oyle, and Venice Turpentine, and boyl them all gently together upon a ſoft fire, ſtirring it continually. Then take it from the fire, and let it cool, then at any time when you mean to uſe it, warm it, and then annoynt either your Rods, Buſhes, Straws, or Lines, and no water will take away the ſtrength.

Of

Of the Fighting Cock.

CHAP. XIX.

Of the Choyce, Ordering, Breeding, and Dyeting of the Fighting-Cock for Battell.

SInce there is no pleaſure more Noble, Delightſome, or void of couzenage and deceit then this pleaſure of Cocking is; and ſince many of the beſt wiſdomes of our Nation have been pleaſed to participate with the delights therein, I think it not amiſs, as well for the inſtruction of thoſe which are unexperienced, as fortifying of them which have ſome knowledge therein, to declare in a few Lines the Election, Breeding, and Secrets of dyeting the Fighting Cock, which having been hitherto concealed and unwritten of, is (for our pleaſure ſake) as worthy of a general knowledge as any delight whatſoever.

To ſpeak then firſt of the choyce of the Fighting Cock, you ſhall underſtand that the beſt Characters you can obſerve in him is the ſhape, Colour, Courage, and ſharp heel; for his ſhape, the middle and different ſize is ever accounted beſt because they be ever moſt matchable, ſtrong, nimble, and ready for your pleaſure. The choyce of the Cock for the battel.

ſure in his battle : and ſo the exceeding little Cock is as hard to match, and is commonly weak and tedious in his manner of Fighting. He would be of a proud and upright ſhape, with a ſmall head, like unto a Spar-hawk, a quick large eye, and a ſtrong back, crookt and bigge at the ſetting on, and in colour ſuitable to the plume of his feathers, as black, yellow, or reddiſh. The beam of his legge would be very ſtrong, and according to his Plume, Blew, Gray, or yellow : his ſpurres long, rough, and ſharpe, a little bending and looking inward.

For his Colour, the gray pyle, the yellow pyle, or the red with the black breaſt is eſteemed the beſt: the pide is not ſo good, and the white and dun are the worſt. If he be Red about the head, like skarlet, it is a ſign of luſt, ſtrength and courage, but if he be pale it is a ſign of ſickneſs and faintneſs.

For his courage, you ſhall obſerve it in his walke, by his treading, and the pride of his going, and in his pen, by his oft crowing. For the ſharpneſſe of his heele, or as Cock-maſters call it, the narrow heele, it is onely ſeene in his fighting, for that Cock is ſeid to be ſharp heel'd or narrow heel'd, which every time he riſeth hitteth, and draweth bloud of his adverſary, gilding (as they term it) his ſpurres in bloud, and threatning at every blow an end of that Battaile.

And theſe Cocks are ſurely of great eſtimation, for the beſt Cock-Maſters are of opinion, that a ſharp heeld Cock, though he be a little falſe, is much better then the trueſt Cock which hath a dull heel, and hitteth ſeldome, for though the one fight long yet he ſeldome wounds, and the other though he will not indure the uttermoſt hewing, yet he makes a very ſuddain and quick diſpatch of his buſineſſe, for every blow puts his adverſary in danger.

But that Cock which is both aſſuredly hard, and alſo very ſharp heeld, he is to be eſteemed, and is of the moſt account above all other, and therefore in your general Election chuſe him which is of a ſtrong ſhape, good colour, true valour, and of a moſt ſharp and ready heel.

Now for the breeding of theſe Cocks for the battle, it is much diffe-

differing from those of the dunghill, for they are like Birds of prey, in which the female is ever to be preferred and esteemed before the Male, and so in the breed of these Birds, you must be sure that your Hen be right, that is to say, she must be of a right plume, as grey grissel, speckt or yellowish, black or brown is not amiss: she must be kindly unto her young, and of large body, well poaked behind for large Egges, and well tusted on the crown, which shews courage: if she have Weapons she is better, but for her valour it must be excellent, for if there be any sort of cowardise in her, the chickens cannot be true. The breeding of the battaile Cock.

And it is a note amongst the best breeders, that the perfect Hen from a Dunghill cock, will bring a good Chicken, but the best Cock from a Dunghill hen can never get a good bird; and I have known in mine own experience, that the two famousest Cocks that ever fought in these dayes, the one called Noble, the other Grissel, begot on many ill Hens very bad Cocks; but the most famous Hen Jinks never brought forth ill Bird, how bad soever her Cock were.

Having then unto perfect Cocks got perfect Hennes, (for that is the best breeding) you shall know that the best season of the year to breed in, is from the increase of the Moon in *February*, to the increase of the Moon in *March*: for one *March* bird is ever better worth than three at any other season. You shall place her pen in which she sitteth, to stand warm, and to make her bed of soft and sweet straw, for they be much tenderer then the Dunghills are; neither shall you suffer any other Fowl to come in her view where she sits, for it will move her to displeasure, and make her to indanger her Egs.

You shall also observe in her sitting, whether she be busie to turn her Eggs, (which is a good sign in a Henne) and if she be slack, you shall help her at such times as she riseth from her nest, and ever be sure that when she commeth from her nest, to have meat and water ready for her; left being forced to seek her food, she suffer her Egs to cool too much: also, you shall have Sand, Gravell, and fine sifted ashes in the Room where she sitteth, in which she may bath and trim her self, at her pleasure.

After one and twenty dayes is the time of their hatching, and

and if when they are new hatched, ſhe do neglect to cover and keep the firſt warm till the reſt be diſcloſed, you ſhall obſerve her and take thoſe that are firſt opened, and lapping them in warm Wool, lay them within the ayr of the fire till the reſt be hatcht, & then put them all under her, and keeping both the hen & them exceeding warm, for they be ſo tender that the leaſt cold will kill them, and ſuffer neither them nor the hen to go abroad into the ayr till they be a month old; and let them have ſtore of food, as Oat-meal, Cheeſe-parings, Chilter-wheat, and ſuch like, and a large Room to walk in, the floor being boord; for the earth floor is too moyſt, and the playſter-floor too cold.

After they are a month old, you ſhall let them walk in ſome graſs Court or green place, where they may have ſtore of Worms, but by all means be ſure there be no ſtinking puddles of water in it; no ſinks, nor filthy Channels, for it is the greateſt poyſon that can be to birds of this nature, and breedeth thoſe Diſeaſes which are moſt mortall: if every morning before they go forth, you perfume them and their Room with Roſemary, or Peny-royall burnt, it is a great preſervation againſt all thoſe infirmities; or to chop Leek blades amongſt their meat is very good alſo.

In this ſort you ſhall nouriſh them till you may diſtinguiſh the Cock-chicken from the Hen, and then ſeeing their Comb or Wattels but appear, you ſhall cut them away, and ſo annoynt the ſore with ſweet butter till it be whole. This will make them have fine ſmall, ſlender, and ſmooth heads, whereas to ſuffer the Comb to grow to his bigneſſe, and then cut it away, it will make him a gouty thick head, with great lumps: neither is the Flux of bloud wholſome, for the leaſt loſſe of bloud in a feathered foul, is exceeding mortall, and very dangerous.

You ſhall ſuffer your Cock Chicken to go together with their Hens till they begin to fight, and peck one at another, but then you ſhall ſeparate them, and diſperſe them into ſeveral walks; and that walk is the beſt for a Fighting Cock which is fartheſt from reſort, as at Wind-mills or Water-mills, Grange-houſes and ſuch like, where he may live with his Henns with-

out

out the offence or company of other cocks. Lodges in Parks are alſo good, and ſo are Cony-warrens, only they are a little too much haunted with vermine, and that is dangerous. Let the feeding place for your cocks be upon ſoft dry ground, or upon boards: for to feed upon paved earth, or on Plaſter-floors, will make their beaks weak, blunt, and not apt to hold faſt. Any white corn is good food for a cock in his walk, and ſo are toſts or cruſts of bread ſteeped in drink, or mans urine, for it will both ſcour and coole them inwardly.

If your chickens begin to crow (not being ſix months old) clear and lowd, or at unſeaſonable times, doe not eſteem them, for it is an apparant ſigne of cowardiſe and falſhood: for the true cock is very long before he get his voyce, and when he hath it, he obſerves his hours with the beſt judgement. Unto your fighting cock three hens are ſufficient, five are with the moſt, for they are ſo hot of nature, and will tread ſo much, that they ſoon conſume their natural ſtrength.

A cock would not be put to the battel before he be two years old, at which time he is perfect and compleat in every member; for to ſuffer him to fight when his ſpurres are but warts, you may well know his courage, but never his goodneſſe.

You muſt alſo have an eſpeciall care to the Perch whereon your cock ſitteth when he rouſteth, for if it be too ſmall in the gripe, or crooked, or ſo ill placed that he cannot ſit, but he muſt ſtraddle with his legs, any of theſe faults will make him uneven heeld: and whatſoever he was naturally, yet by this accident he will never be good ſtriker, for the making of the Perch either maketh or marreth the cock. Therefore to prevent this fault, the beſt way is to have in your rouſt a row of little Perches, not above ſeven or eight inches in length, and not a foot from the ground, ſo that your cock may with eaſe go up to them, and being ſet, muſt of force have his legs ſtand neer together. It is a rule, that he which is a cloſe ſitter, is ever a narrow striker.

Let the footſtool of the Perch be round & ſmooth, and about the bigneſſe of a mans arm. Yet for your better knowledge, becauſe words cannot ſo well expreſſe theſe quantities, it ſhall not be a-

misse for you to goe to some famous Cockmasters house, and view the Perches which are within his feeding Pennes, and according to those proportions frame your owne; for the Perch is the making and spoyling of any cock whatsoever.

Again, you must be careful, that when your dock doth leap from his Perch, that the ground be soft whereon he lighteth, for if it be hard or rough, it will make your cock grow gowty, and put forth knots upon his feet.

The dyeting of cocks for the battel.

Now lastly, for the dyeting and ordering of a cock for a battel, which is a secret never yet divulged, but kept close in the breast of some few; and forasmuch as in it only consisteth all the ground and substance of the pleasure, the best cock undicted, not being able to encounter with the worst cock that is dyeted, you shall understand, that the time to make up your cocks, is at the latter end of *August* (for from that time till the latter end of *May*, Cocking is in request) and having viewed them well, and seen that they are sound, hard feathered, and full summed, you shall put them into severall pens, the models whereof you may behold in every cockmasters, or Inne-keepers house, having a moving Perch in it, to set at which corner of the Pen you please.

Of taking up Cocks.

Of the Cock-Penne.

This Pen should be made of very close boards, well joined together all but the fore-front, which would be made open like a grate, one bar two inches distant from another, and before the grate, two large troughs of soft wood, one for his meat, the other for his waters. The door of the grate should be made to lift up and down, of such largenesse, that you may with ease put your cock in and out, and dayly clense the Penne to keep it sweet and wholsome.

This Pen would be at least three foot in height, and two foot in square every way, and many of them may be joyned in one front, according to the bignesse of the room, in which they are built: and also one above another, only with over-shadowing boards, so that one cock may not see another.

Of his diet.

When your cock, as aforesaid, is put up into his Penne, you shall for three or four dayes, feed him only with old manchet, the cruft pared away, and cut into little square bits, and you shall

ſhall give him to the quantity of a good handful at a time, and you ſhall feed him three times in a day, that is to ſay, at Sun riſe, at higſt noon, and at Sun-ſet. You ſhall ever let him have before him the fineſt, coldeſt, and ſweeteſt Spring-water that you can get.

After he hath been thus fed four dayes, and his Corn, Wormes, Gravel, and other courſe feeding gone from him, in the Morning take him out of the the Pen, and another cock alſo, and putting a pair of Hots upon each of their heels, which hots are ſoft bumbaſted roules of leather, covering their ſpurres, ſo that they cannot hurt or bruiſe one another, and ſo ſetting them down on the green graſſe, let them fight and buffet one another a good ſpace, as long as in their teaching they do not wound or draw blood one upon another; and this is called the ſparring of cocks: it heateth and chaſeth their bodies, and it breaketh the fat and glut, which is within them, and maketh it apt to cleanſe and come away. Of Sparring of Cocks.

After your cocks have ſparred ſufficiently, and that you ſee them pant, and grow weary you ſhall take them up, and taking off their Hots, you muſt have deep ſtraw baskets made for the purpoſe, with ſweet ſoft ſtraw to the middle, and then put in your cock, cover him with ſweet ſtraw up to the top, and then lay on the lid cloſe, and there let your cock ſtove and ſweat till the evening.

But yet before you put him into the ſtove, you ſhall take butter and roſemary finely chopt, and white Sugar candy, all mixt together, and give him a lump thereof, as much as your thumb, and then let him ſweat; for the nature of this ſcouring is to bring away his greaſe, and to breed breath and ſtrength. You may in time of neceſſity, for want of theſe ſtraw baskets ſtow your cock in a cock-bag, by laying ſtraw both under and above him, but it is not ſo good, becauſe the air hath more power to paſſe thorow it.

After four of the clock in the evening, you may take your cock out of the ſtove, and licking his head and eyes all over with your tongue, put him into his Pen, and then taking a good handfull of bread, ſmall cut, put it into his trough, and then piſſing into the trough alſo give it him to eat, ſo as he may

take his bread out of the warm urine, for this will make his ſcouring work, and cleanſe both his head and body wonderfully.

Now you ſhall underſtand, that the bread which you ſhall give him at this time, and at all other times during his dieting, ſhall not be manchet, but a ſpeciall bread made for the purpoſe, in this manner: you ſhall take of wheat-meal half a peck, and of fine oat-meal flower as much, and mixing them together, knead them into a ſtiffe paſte, with Ale, the white of a dozen egs, and halfe a pound of butter, and having wrought the dowe exceeding well, make it into broad thinne cakes, and being three or four dayes old, and the blisterings of the outſide cut away, cut it into little ſquare bits, and give it the cock.

There be ſome others that in this bread will mixe Licoras, Anniſeeds, and other hot Spices, and will alſo in the cock-water, ſteep ſlices of Licoras; but it is not commendable, for it is both unnaturall and unwholeſome, and maketh a cock ſo hot at the heart, that when he comes to the latter end of a battle, he is ſuffocated and overcome with his own heat: therefore I adviſe men of judgement, to take that for the beſt diet, which is moſt naturall, and leaſt contrary unto the fowls ordinary feeding.

But to return to my former diſcourſe, after you have fed your cock thus for all night, you ſhall the next day let him reſt, and only give him his ordinary feedings of bread and water, then the next day (which is the ſecond day after his ſparring) you ſhall take him into a fair even green Cloſe, and there ſetting him down, having ſome Dunghil-cock in your arms, you ſhall ſhew it him, and ſo run from him, and entice him to follow you, and ſo chaſe him up and down half an hour at leaſt, ſuffering him now and then to a ſtroke at the Dunghill-cock. And when you ſee that he is well heated and panteth, you ſhall take him up and bear him into your cock-houſe, and there firſt give him this ſcouring: Take of butter, which hath no ſalt, halfe a pound, and beat it in a mortar with the leaves of Herb of greaſe, hyſop, and Roſemary till the herbs cannot be perceived, and that the butter is brought to a green

Salve

Salve, and of this give the cock a roul or two, as big as your thumb, and then ſtove him in a basket, as is before ſaid, till evening, and then feed as was formerly declared.

The next day you ſhall let him reſt and feed, and the next day after, you ſhall ſparre him again: and thus every other day for the firſt forenight, you ſhall either ſparre or chaſe your cock, which are the moſt naturalleſt and kindlieſt heats that you can give him, and after every heat, you ſhall give him a ſcouring: for this will break and cleanſe from him all greaſe, glut and filthineſſe, which lying in his body, makes him purſie, faint, and not able to ſtand out the latter end of a battel.

Havind fed your cock thus the firſt fortnight, the ſecond fortnight you ſhall alſo feed him in the ſame manner, and with the ſame food; but you ſhall not ſparre him, or give him heats above twice in a week at the moſt inſomuch, that thrice or four times in the fortnight will be ſufficient, and each time you ſhall ſtove and ſcour him according to the nature of his heats, that is to ſay, if you heat him much, you ſhall ſtove him long, and give of your ſcouring the greater quantity, if you finde that he is in good breath, and needeth but ſlight heats, then you ſhall ſtove him the leſſe while, and give him the leſſe of the ſcouring.

Now to the third fortnight, which maketh up the ſix weeks compleat (being a time ſufficient to prepare a cock for the battel) you ſhall feed him as aforeſaid, but you ſhall not ſpar him at all, for fear of making his head tender or ſore, neither give him any violent exerciſe, but only twice or thrice in the fortnight, moderately let him run and chaſe up and down, to maintain his wind, and now and then cuffe a cock, which you ſhall hold to him in your hands, which done you ſhall give him his ſcouring well rounded in the powder of Sugar-candy, white or brown, but brown is the better, for the cock then being come to perfect breath, and having no filth in his body for the ſcouring to work on, it will work and cauſe operation upon the vitall parts, and make the cock ſick, which the Sugar-candy will prevent, and ſtrengthen nature againſt the medicine.

After the end of ſix weeks feeding, finding your cock in luſt and breath, you may fight him at your pleaſure, obſerving that he have at leaſt three dayes reſt before he fight, and well emptied of his meat before you bring him into the Pit.

The matching of Cocks.

Now when you bring him into the Pit to fight, you muſt have an eſpeciall care to the matching of him, for in that art conſiſteth the greateſt glory of the Cock-maſter, for what availeth it to feed never ſo well, if in the matching you give that advantage which overthroweth your former labour? Therefore in your matching, there are two things to be conſidered: that is, the length of cocks, and the ſtrength of cocks; for if your adverſary cock be too long, yours ſhall hardly catch his head, and then he can never endanger eye or life: and if he be the ſtronger, he will overbear your cock, and not ſuffer him to riſe, and ſtrike with any advantage: therefor for the knowledge of theſe two rules, though experience be the beſt Tutor, yet the firſt, which is length, you ſhall judge by your eye, when you gripe the cock about the waſt, and make him ſhoot out his legs, in which poſture you ſhall ſee the utmoſt of his beieght, and ſo compare them in your judgement. Now for his ſtrength, which is known by the thickneſſe of his body, (for that cock is ever held the ſtrongeſt, which is the largeſt in the garth) you ſhall know it by the meaſure of your hands, griping the cock about from the points of your great finger, to the joints of your thumbs, and either of theſe advantages by no meane give to your adverſary, but if you doubt loſſe in the one, yet be ſure to gain in the other: for the weak long cock will riſe at more eaſe, and the ſhort ſtrong cock will give the ſurer blow, ſo that becauſe all cocks are not caſt into a mould, there may be a reconciliation of the advantages, yet by all means give as little as you can.

Of preparing Cocks to the fight.

When your cock is equally match, you ſhall thus prepare him to the fight, firſt, with a pair of fine cock ſhears you ſhall cut all his main off, cloſe unto his neck, even from his head, unto the ſetting on of his ſhoulders; then you ſhall clip off all the feathers from his taile, cloſe unto his Rumpe, where the more skarlet that you ſee in his Rumpe, in the better eſtate of body the cock is. Then you ſhall take his wings, and

ſpreading

ſpreading them forth by the length of the firſt feather of his riſing wing, clip the reſt ſlope wiſe with ſharp points, that in his riſing, he may therewith indanger the eye of his adverſary: then with a ſharp knife you ſhall ſcrape ſmooth, and ſharpen his ſpurs.

Laſtly, you ſhall ſee that there be no feathers about the crown of his head, for his foe to take hold on, and then with your ſpittle, moiſtning his head all over, turn him into the Pit to move his fortune. When the battle is ended, the firſt thing you doe, you ſhall ſearch wounds, and as many as you can find, you ſhall with your mouth, ſuck the blood out of them, then waſh them very wel with warm urine, to keep them from ranckling, and then preſently give him a roul or two of your beſt ſcouring, and ſo ſtove him up as hot as you can, both with ſweet ſtraw and blanketting, in a cloſe basket for all that night; then in the morning take him forth, and if his head be much ſweld, you ſhall ſuck his wounds again, and bath them with warm urine, then having in a fine bag the powder of the herb Robert, well dried, and finely ſeirſt, pounce all the ſore places therewith, and then give the cock a good handful of bread to eat, out of warm urine, and ſo put him into the ſtove again, in the ſame manner as before mentioned, and by no means let him feel the air until all the ſwelling be gone, but twice a day ſuck his wounds, dreſſe him, and feed him, as is aforeſaid. The ordering of cocks after battel, and the curing them.

But if he have received any hurt, or blemiſh in his eye, then you ſhall take a leafe or two of right ground ivy, not that which runneth along the ground, and is of the ignorant ſo called, but that which growes in little tufts in the bottome of hedges, and is a little rough leafe, and having chewed it very well in your mouth, and ſuckt out the juyce, ſpit it in the eye of the cock, and it will not only cure it of any wound, or any blow in the eye, where the ſight is not pierced, but alſo defend it from the breeding of films, hawes, warts, or any ſuch other infirmities which quite deſtroy the ſight: Obſerving that you do not ceaſe to dreſs the eye therewith ſo long as you ſhall perceive any blemiſh therein.

Now if your cock have in his ſight veyned himſelf, either by narrow ſtriking, or other croſſe blow, you ſhall find out the wound.

wound, and preſently bind thereunto the fine ſoft down of a hare, and it will both ſtaunch it and cure it.

For any other caſual infirmity or ſickneſſe which ſhall happen unto cocks, look in the former book called *Cheap and Good*, and you ſhall find them ſet down at large; only I will give you this one ſmall remembrance, that after you have put forth your wounded cocks to their walks, and come to viſit them a month or two after, if you find about their head any ſwollen bunches, hard, and blackiſh at one end, you ſhall know that in ſuch bunches are unſound cores; therefore preſently with your knife, you ſhall open the ſame, and cruſh out the cores with your thumbs, then with your mouth ſuck out all the corruption, and then fill the holes full of freſh butter, and it will cure them. And thus much for the nature of the cock, and how to keep him for his beſt uſe.

FINIS.

The Table of the Country Contentments.

Of hunting in general, and all the particular knowledges belonging thereunto. p. 1
The neceſſity and uſe of recreation. 2
The praiſe of hunting. 3
What hunting is. ib
The diverſities of chaſes. ib
The diverſities of hounds. ib
The colour of hounds. ib
The ſhape and proportion of hounds. 4
The compoſition of kennels. 5
The middle ſiz'd Dog for cunning. 6
For ſweetneſſe of cry. ib
For loudneſſe of cry. 7
For deepneſſe of cry. ib
For training of horſes. ib
A good caveat to Gentlemen. 8
Objection againſt ſwift hounds. 9
The anſwer to the objection. ib
Correction of ſwift hounds faults. 10
Of high way hounds. ib
The kennell for exerciſe of the body. ib
Of the hounds kennel. 12
The ſcituation of the kennel. ib
Of feeding of hounds. 14
Diverſities of meats ib
The manner of feeding ib
Meat for ſick and weak hounds. 15
Beſt hours of feeding. ib
A proportion of meat. ib
Ordering of hounds after hunting. 16
The curing of diſeaſes in hounds ib
Of killing fleas and lice. ib
To kill worms. ib
Biting with venemous beaſts. 17
Biting with a mad dog. ib
Of a mad dog, and the ſigns. ib
Of gauling. ib
Of a tetter. 18
For the itch. ib
For the mangy or ſcab. ib
Of Wounds. ib
Of a Canker in the ear. ib
Of ſurbaiting. 19
Of bruiſes. ib
For the ſtone. ib

For costivenesse. ib
For any diseases in the ears. ib
For sore eyes. ib
For broken bones. 20
Of the breeding of hounds ib
Hounds must suite one another. ib
The months to breed in. ib
Under which signs to breed. 21
Ordering of bratches after whelping. ib
When to wean whelps, ib
How to enter whelps. ib
Observations in the entring of whelps. ib
Of chases in generall. 23
Of the Stag and his profits. ib
How to know an old Stag. 24
The casting of heads. ib
How to find a Stag. ib
The hunting of the Stag. 25
To know when a Stag is weary. ib
Of the Buck. 26
Of the Hare. ib
Of her profits. ib
The hunting of the Hare, ib
Where to find Hares. ib
The knowledge of the Hares form.
The Hares sleights and shifts. ib
The hunting of the Fox and Badger. 28
Of hawking with all sorts of Hawks. 29
Kinds of Hawks. ib
The flights of Hawks. ib
The ordering of Hawks. ib
The managing of Hawks. 30
The luring of Hawks. ib
Bating of Hawks. ib
The enseaming, giving, casting, and scowring. 31
Of flying at the Pheasant or Partridge, ib
Of flying at fowl. 32
Helps for faults in long winged Hawks. 33
Of the stand. ib
Against forwardnesse. ib
To make a Hawk inward. 34
To keep a Hawk in high flying. ib
To bring Hawks upward. ib
Faults in short-winged Hawks. ib
Of turning tayle. ib
If a Hawk shall not flye at all. ib
Too much fondnesse of the man. 35
Mewing of long-winged hawks. ib
Mewing at the stone. ib
Mewing at large. ib
Mewing of short-winged Hawks. ib
When to draw Hawks. 36
Diseases in Hawks. ib
Of coursing with Greyhounds. ib
Breeding of Greyhounds. ib
Best place for breed. 37
The best Greyhound. ib
Nimblenesse in Greyhounds. ib
Difference betwixt dogs and bitches. 38
Dogs and bitches for breed. ib

The

The ſhape of Greyhounds ib
Dyeting of Grey hounds for the courſe. 39
Of what diet conſiſteth. ib
Of food. ib
Of generall food. 40
Of particular food. ib
Food for a match. ib
Hours of feeding. ib
Of exerciſe by courſing. 41
Ordering dogs after courſing. ib
Of airing. ib
Kennelling the Greyhound. 43
The lawes of courſing. ib
Of divers other particular recreations. 45
Shooting in the long bow. ib
Of ſhooting in Croſbowes 46
Of Bowling. ib
Of Tennis and Baloon bals. ib
The whole art of Angling. 47
The uſe of Angling. ib
The antiquity. 49
Of the angle rods, lines, corks, &c. 50
Of the top of the Angle rod. 50
Angle rod of one piece. 51
Angle rod of many pieces. ib
The line. 52
Colouring of lines. 53
Of the Cork, 55
Of angle hooks. 56
Of other implements. 58
Of the Anglers inward quality. 59
Anglers apparel. ib
Anglers vertues. ib
Certain Cautions. 60
Beſt and worſt ſeaſons to angle in 63
The Anglers manner of ſtanding. ib
Of fiſhes haunts. 65
Objections and anſwers. 66
Of baits in general. 67
Seaſons for baits. ib
Of flies. 68
Preſervation of baits. 69
Of Paſtes. 90
The angling for ſeverall fiſh. 71
Of the Goodgin. ib
The Carp. 72
The Chub, Chenny, &c. ib
The Eele, Flounder, &c. 73
The Grayling, Bream and Tench. ib
The Pike, Bleak, &c. 74
Of Snickling the Pike. 75
Of the Salmon. ib
The taking of Fiſh without Angle. 76
Preſerving of Fiſh from devourers. 77
Ordering of fiſh ponds. 78
The beſt water-lime 80
Of the fighting Cock. 81
The choice of Cocks. ib
Breeding of Cocks. 83
Dieting of Cocks. 86
Taking up of Cocks. ib
The Cock-pen. ib
Of Sparring. 87
Of Diet-bread. ib

The

The first fortnights keeping. ib
The second fortnights keeping. 89
The third fortnights keeping. ib
The matching of a Cock. 96
Preparing cocks to fight. ib
Ordering of cocks after haul. 97

UNIVERSITY OF CALIFORNIA LIBRARY BERKELEY

FINIS.

1589

THE ENGLISH HOUS-WIFE,

CONTAINING

The inward and outward Vertues which ought to be in a compleat Woman:

As her skill in Phyſick, Surgery, Cookery, Extraction of Oyles, Banquetting ſtuffe, Ordering of great Feaſts, Preſerving of all ſorts of Wines, conceited Secrets, Diſtillations, Perfumes, ordering of Wool, Hemp, Flax: making Cloth and Dying; the knowledge of Dayries: Office of Malting; of Oats, their excellent uſes in a Family: of Brewing, Baking, and all other things belonging to an Houſhold.

A Work generally approved, and now the ſeventh time much augmented, purged, and made moſt profitable and neceſſary for all men, and the generall good of this *NATION.*

By G. M.

LONDON,
Printed by *W. Wilſon*, for *E. Brewſter*, and *George Sawbridge*, at the Bible on Ludgate-hill, neer Fleet-bridge. 1660.

THE

ENGLISH HOUS-WIFE,

CONTAINING

The inward and outward Vertues

which ought to be in a compleat Woman:

As her skill in Physick, Surgery, Cookery, Extraction of Oyles, Banqueting stuffe, Ordering of great Feasts, Preserving of all sorts of Wines, conserved Syrrups, Distillations, Candying, ordering of Wool, Hemp, Flax, making Cloth and Dying, the knowledge of Dyers Drugs, Mellitary Ordinances, excellent rules in Faming of Beer, Ale, Wine, Vinegar, and all other things belonging to an Houshold.

ob:: 1599.

TO THE RIGHT

HONOURABLE

And moſt Excellent Lady,

FRANCIS, Counteſſe Dowager of *EXETER*.

HOwſoever, (Right Honourable and moſt vertuous Lady) this Book may come to your Noble goodneſſe cloathed in an old name or garment, yet doubtleſſe, (Excellent Madam) it is full of many new vertues, which will ever admire and ſerve you; and though it can adde nothing to your owne rare and unparalleled knowledge, yet may it to thoſe noble good ones, (which will indeavour any ſmall ſpark of your imitation) bring ſuch a light as may make them ſhine with a great deal of charity. I do not aſſume to my ſelfe, (though I am not altogether ignorant in ability to judge of theſe things) the full intention, and ſcope of this whole work: for it is true, great Lady, that much of it was a Manuſcript, which many years agone be-

longed to an Honourable Countesse, one of the greatest Glories of our Kingdome, and were the opinions of the greatest Physicians which then lived; which being now approved by one not inferiour to any of the profession, I was the rather imboldned to send it to your blessed hand; knowing you to be a Mistresse so full of Honourable piety and goodnesse, that although this imperfect offer may come unto you weak and disable, yet your noble vertue will support it, and make it so strong in the world, that I doubt not but it shall doe service to all those which will serve you, whilst my selfe and my poor prayers shall to my last gasp labour to attend you.

The true admirer of your
Noble vertues,

Gervase Markham.

THE

THE TABLE.

CHAP. I.

THe inward vertues of the House-wife. pag. 2.
Her garments. pag. 3.
Her dyet and generall vertues. pag. 4.
Fevers and their kinds. pag. 4, 44.
To make one sweat. pag. 7, 9.
A preservative against the plague. pag. 8.
A Cordiall against infection. pag. 9.
To draw a plague-botch to any place pag. 9.
For the head-ach. pag. 9, 14.
For the Frenzie pag. 9.
For the Lethargy pag. 9.
To provoke sleep pag. 10.
For the swimming of the head. pag. 10.
For all colds and coughs. pag. 10, 17.
For the Palsey pag. 10.
For the falling-sickness. pag. 11.
To help hearing pag. 14.
For the Rheume pag. 14.
For stinking breath. pag. 12.
For the tooth-ach. pag. 12, 14.
For all sore eyes pag. 13, 14, 16.
For a Canker pag. 13.
For swelling in the mouth. ibid.
For the quinsey or the squinancy ibid.
For drunkennesse ibid.
To quicken wit pag. 14.
For the Kings evill ibid.
To stanch bleeding pag. 14, 20, 22.
To draw out bones 14.
For the falling of the mould of the head pag. 14.
To make teeth white pag. 14.
For any venome in the ear. pag. 15.
For stinking nostrills pag. 15.
To make hair grow pag. 17.
For a Sance face ibid.
For hoarsenesse in the throat. ibid.
For the Tysick pag. 18.
For grief in the stomack p. 18.
For spitting blood ibid.
For vomiting 18, 19.
For the Iliaca passio pag. 19.
Additions to the diseases of the stomack ibid.
For pain in the breast ibid.
For the Mother ibid.
Obstructions in the liver pag. 19.
For the pleurisie pag. 22.
For a stich ibid.
For any Consumption pag. 20.
For the Jaundise pag. 21.
Additions to the diseases of the liver ibid.

For

The Table.

For a Ring-worm 22
For the Dropſie ibid.
For the ſpleen ibid.
For paine in the ſide ibid.
For fatneſſe and ſhort breath. ibid.
Additions to the diſeaſes of the ſplean pag. 23.
For the diſeaſes of the haan. pag. 23.
For the wind Colick pag. 23,25.
For a laſk pag. 23.
For the bloody flux 24,25.
For Coſtiveneſs pag. 24.
For wormes ibid.
Additions to the diſeaſes in the belly pag. 25.
Hardneſſe of the belly. ibid.
For the ſtopping of the womb. ibid pag. 26.
For the Ruptune ibid.
For the Stone. pag. 26,27,28.
To help vertue pag. 27.
For the Strangulion. pag. 28.
Additions to the diſeaſes of the reines pag. 29.
For the Gonorrhea ibid.
For weakneſſe in the back. ibid.
For the Hemorrhoids ibid.
For the falling of the Fundament ibid pag. 30.
Additions to the diſeaſes of the privy parts 30.
For the green-ſickneſſe ibid.
To increaſe womens milk ibid.
To drye up milk pag. 31.
For eaſie child-bearing ibid.
For the dead child ibid.
For unreaſonable teeming ibid.
Additions to womens infirmities ibid.
For the ſtamers ibid.
For the Matrix ibid.
For ſore breaſts pag. 32.
For women in Childbed pag. 32.
For the Morphew ibid.
For the Gout ibid.
For the Sciatica pag. 33.
For the ſtinging of venemous beaſts 33, 38.
For ſpeeld legs pag. 33.
For old and new ſores. pag. 33, 34, 35, 37, 38.
For ſcabs and itch. pag. 34, & 39.
For the Lepreſie pag. 34.
For pimples ibid.
Privy parts burnt 35.
For any burning. pag. 35, 36, & 37.
For ſcalding pag. 35.
To take away dead fleſh. pag. 35, 37.
For ſinews cut or ſhrunk pag. 36
To break an impoſthume. pag. 36.
For a Ring-worm. pag. 38.
To take away ſcars of the ſmall pox. pag. 39.
For the french pox. pag. 39.
Additions to green wounds. pag. 40, 41.
For pricking with a thorn. pag. 41.
Additions for aches & ſwellings pag. 41.
For paine in joynts. pag. 42.

Additions

Additions to griefe in the hands 42, 43.
A bath to clear the skin. pag. 43.
The oyle of swallowes. pag. 44.
Oyle of Camomile. pag. 45.
Oyle of Lavender pag. 45.
To make smooth hands. pag. 45.
To make Dr. Stevens water. ibid.
To make Rosasolis p. 46.
Additions to oyles p. 47.
To make Oyle of Roses or Violets pag. 47.
Oyle of Nutmegs ibid.
Oyle of Spike 48.
Oyle of Mastick pag. 48.

CHAP. II.

THe outward and active knowledge of the Houſ-wife, pag. 49.
Knowledge of hearbs ibid.
Skill in Gardens p. 50.
Skill in Cookery pag. 51.
Of ſallets ſimple and compound. pag. 55. 53, 54.
Of fraiſes of all kinds. pag. 45, 47
Of Quelquechoſes p. 58.
Additions to Cookery p. 85.
Puddings of all kinds. p. 58, 59, 60
Boyld meats of all kinds. pag. 61, to 65.
The Oleopothrigo. pag. 63.
Additions to boyled meats. pag. 66.
Roſt meats of all kinds. pag. 68, &c.
Obſervations in Roaſt meates, pag. 61
Spitting of meats pag. 61.
Temperature of fire pag. 61.
Complexion of meats 61.
Baſting of meats 61.
To know when meats are enough pag. 62.
Ordering of meats to be roaſted. pag. 66.
Sauces of all kinds pag. 67, 68.
Additions to Sauces pag. 69.
Of Carbonadoes p. 70.
Additions to Carbonadoes. p. 71.
Dreſſing of fiſh pag. 72.
Of the paſtery and bak't meats 73
Mixture of paſtes. p. 74.
Of puff-paſts p. 74.
Additions to the paſtery. p. 77, 78, 79, &c.
To recover Veniſon tainted. p. 80.
To preſerve Quinces to bake. p. 82.
Of Tarts p. 82, to 84.
Of White-pots pag. 84.
Of banquetting ſtuffe of all kind. 87, 88, &c.
Of divers waters p. 99.
To make any Conſerve 99.
Additions to Banquetting-ſtuffe p. 95.
To make Ipocras p. 95.
To candy any thing p. 97.
Ordering of banquets. p. 97.
Ordering of great feaſts. pag. 98.

CHAP.

CHAP. III.

Of Distillations and their vertues, from pag. 101. to 109.
The vertues of several waters p. 106.
Of perfuming 100, 109.
To make Pomanders. p. 109.
To make vinegar pag. 110.
To make verjuyce ibid.
Additions to conceited secrets ibid.
To perfume Gloves 11.

CHAP. IIII.

The ordering, preserving, and helping of all sorts of Wines. pag. 112. to 121.
Of gaging p. 118.
To choose Wines pag. 117.

CHAP. V.

Of Wool, Hemp, Flax, Cloth, and dying of all Colours. from pag. 122. to 140.

CHAP. VI.

Of Dairies, Butter, Cheese, &c. from pag. 140. to 153.

CHAP. VII.

The Office of the Maltster, the Secrets and knowledge thereof. pag. 153. to 175.

CHAP. VIII.

The excellency of Oates, the vertues and uses thereof, from pag. 175. to 181.

CHAP. IX.

The Office of the Brewhouse, and the Bakehouse, and their uses, from pag. 181, to the end.
To make Perry, and Cider, pag. 184.

THE

THE APPROVED

BOOKE

CALLED THE

ENGLISH HOUS-WIFE,

CONTAINING

All the vertuous Knowledges and Actions both of mind and body, which ought to be in any compleat Houſe-wife *of what degree or calling ſoever.*

UNIVERSITY LIBRARY CAMBRIDGE

The Second Book.

CHAP. I.

Of the inward vertues of the mind, which ought to be in every Houſ wife. And firſt of her general knowledges both in Phyſick, and Surgery, with plain approved medicines for health of the Houſehold; alſo the extraction of excellent Oyles fit for thoſe purpoſes.

HAving already in a ſummary briefneſs paſſed through thoſe outward parts of Husbandry which belong unto the perfect Husbandman, who is the Father and Maſter of the Family, and whoſe Office and imployments are ever for the moſt part abroad, or removed from the houſe, as in the Field or yard: It is now meet, that we deſcend in as orderly a Method as wee can, to the office of our Engliſh *Houſe wife*, who is the mother and Miſtriſſe of

the family, and hath her moſt generall imployments within the houſe; where from the generall example of her vertues, and the moſt approved skill of her knowledges thoſe of her Family, may both learn to ſerve God, and ſuſtain man in that godly and profitable ſort, which is required of every true Chriſtian.

A Huſ-wive muſt be religious.

Firſt then to ſpeak of the inward vertues of her mind, ſhe ought, above all things, to be of an upright and ſincere Religion, and in the ſame both zealous and conſtant, giving by her example, and incitement and ſpur, unto all her familiy to purſue the ſame ſteps, and to utter forth by the inſtruction of her life, thoſe vertuous fruits of good living, which ſhall be pleaſing both to God and his creatures. I do not mean that herein ſhe ſhould utter forth that violence of ſpirit, which many of our (vainly accounted pure) women do, drawing a contempt to the ordinary Miniſtry, and thinking nothing lawfull but the fantaſies of their own invention, uſurping to themſelves a power of preaching and interpreting the holy Word, to which onely they ought to be but hearers and believers, or at the moſt but modeſt perſwaders; this is not the office either of good Houſewife, or good woman. But let your Engliſh Houſewife be a godly, conſtant, and Religious woman, learning from the worthy Preacher and her Husband, thoſe good examples which ſhe ſhall with all carefull diligence ſee exerciſed amongſt her Servants.

In which practiſe of hers, what particular rules are to be obſerved, I leave her to learn of them who are profeſſed Divines, and have purpoſely written of this argument; only thus much will I ſay, which each ones experience will teach him to be true, that the more carefull the maſter and miſtriſs are to bring up their ſervants in the dayly exerciſes of Religion toward God, the more faithfull they ſhould find them in all their buſineſſes towards men, and procure Gods favour the more plentifully on all the houſhold: and therefore a ſmall time, morning and evening beſtowed in Prayers and other exerciſes of Religion, will prove no loſt time, at the weeks end.

She muſt be temperate.

Next unto her ſanctity and Holineſſe of life, it is meet that

that our Engliſh Houſwife be a woman of great modeſty and temperance, as well inwardly as outwardly: Inwardly, as in her behaviour and carriage towards her Husband, wherein ſhe ſhall ſhun all violence of rage, paſſion and humour, coveting leſſe to direct then to be directed, appearing ever unto him pleaſant, amiable, and delightfull; and, though occaſion of miſhaps, or the miſ-government of his will may induce her to contrary thoughts, yet vertuouſly to ſuppreſs them, and with a mild ſufferance rather to call him home from his error, then with the ſtrength of anger to abate the leaſt ſpark of his evill, calling into her mind that evil and uncomely language is deformed though uttered even to ſervants, but moſt monſtrous and ugely when it appeares before the preſence of a Husband: Outwardly, as in her apparrel and dyet, both which ſhe ſhall proportion according to the competency of her Husbands eſtate and calling, making her circle rather ſtrait then large: for it is a rule, if wee extend to the uttermoſt, wee take away increaſe; if wee goe a haires breath beyond, wee enter into conſumption: but if we preſerve any part, we build ſtrong forts againſt the adverſaries of fortune, provided that ſuch preſervation be honeſt and conſcionable: for as laviſh prodigality is bruitiſh, ſo miſerable covetouſneſs is helliſh. Let therefore the Houſewives garments be comely and ſtrong, made as well to preſerve the health, as to adorn the perſon, altogether without toyiſh garniſhes, or the gloſs of light colours, and as far from the vanity of new and fantaſtick faſhions, as neer to the comely imitation of modeſt Matrons Let her dyet be wholſome and cleanly, prepared at due hours, and Cookt with care and diligence, let it be rather to ſatisfie nature, then our affections, and apter to kill hunger then revive new appetites; let it proceed more from the proviſion of her own yard, then the furniture of the Markets; and let it be rather eſteemed for the familiar acquaintance ſhe hath with it, then for the ſtrangeneſs and rarity it bringeth from other Countries

Other Garments.

Of her Dyet.

To conclude, our Engliſh Houſwife muſt be of chaſte thought ſtout courage, patient, untyred, watchfull, diligent, witty, pleaſant, conſtant in friendſhip, full of good Neighbour-hood, wiſe in Diſcourſe, but not frequent therein, ſharp and quick

Her general Vertues.

of ſpeech, but not bitter or talkative, ſecret in her affaires, comfortable in her counſels, and generally skilfull in the worthy knowledges which do belong to her vocation; of all, or moſt whereof, I now in the enſuing diſcourſe intend to ſpeak more largely.

Of her vertues Of her knowledge in Phyſick.

To begin then with one of the moſt principall vertues which do belong to our Engliſh Houſ-wife; you ſhall underſtand, that ſith the preſervation and care of the family touching their health and ſoundneſſe of body conſiſteth moſt in the diligence of her, it is meet that ſhe have a phyſicall kind of knowledge, how to adminiſter many wholſome receipts or medicines for the good of their healths, as well to prevent the firſt occaſion of ſickneſs, as to take away the effects and evill of the ſame, when it hath made ſeaſure on the body. Indeed we muſt confeſſe that the depth and ſecrets of this moſt excellent Art of Phyſick, are far beyond the capacity of the moſt skilfull woman, as Lodging only in the breaſt of learned profeſſors, yet that our Houſ wife may from them receive ſome ordinary rules and medicines, which may avail for the benefit of her Family, is (in our common experience) no derogation at all to that worthy Art. Neither do I intend here to load her mind with all the Symptomes, accidents, and effects which go before or after every ſickneſs, as though I would have her to aſſume the name of a Practitioner, but only relate unto her ſome approved medicines, and old Doctrines which have been gathered together, by two excellent and famous Phyſitians, and in a Manuſcript given to a great worthy Counteſſe of this Land, (for far be it from me to attribute this goodneſſe unto mine own knowledge) and delivered by my common and ordinary experience, for the curing of thoſe ordinary ſickneſſes which dayly perturb the health of men and women.

Dr. *Burker.* Dr. *Bonelius.*

Of Fevers in generall.

Firſt then to ſpeak of Feavers or Agues; the Houſe-wife ſhall know thoſe kinds thereof, which are moſt familiar and ordinary as the *Quotidian* or dayly Ague, the *Tertian* or every other dayes ague, the *Quartan* or every third dayes ague, the Peſtilent, which keepeth no order in his fits, but is more dangerous and mortal; And laſtly, the accidentall Fever, which proceedeth from the receit of ſome wound, or other painfull Perturbation

of

of the ſpirits. There be ſundry other Feavers, which comming from Conſumptions, and other long continued ſickneſſes, do altogether ſurpaſſe our Houſ-wives capacity.

Firſt then for the *Quotidian* (whoſe fits alwaies laſt above twelve hours) you ſhall take a new laid egg, and opening the crown, you ſhall put over the white, then fill up the ſhell with good *Aquavitæ*, and ſtir it and the yolk very well together, and then as ſoon as you feel your cold fit begin to come upon you, ſup up the egg, and either labour till you ſweat, or elſe laying great ſtore of cloaths upon you, put your ſelfe in a ſweat in your bed; and thus do while your fits continue; and for your drink, let it be only poſſet ale. Of the quotidian.

For a ſingle *Tertian* feaver, or each other dayes ague, take a quart of poſſet ale, the curd being well drained from the ſame, and put thereunto a good handful of *Dandelion*; and then ſetting it upon the fire, boil it till a fourth part be conſumed, then as ſoon as your cold fit beginneth, drink a good draught thereof, and then either labour till you ſweat, or elſe force your ſelfe to ſweat in your bed; but labour is much the better, provided that you take not cold after it, and thus do while your fits continue, and in all your ſickneſſe, let your drink be poſſet ale, thus boiled with the ſame herb. Of the ſingle Tertian.

For the accidentall Feaver, which commeth by means of ſome dangerous wound received, although for the moſt part it is an ill ſigne, if it be ſtrong and continuing, yet many times it abateth, and the party recovereth when the wound is well tended and comforted with ſuch ſeverall balms, and hot oyles, as are moſt fit to be applied to the member ſo grieved or injured: therefore in this Feaver you muſt reſpect the wound from whence the accidoth proceed, and as it recovereth, ſo ſhall you ſee the Feaver waſt and diminiſh Of the accidental Fever.

For the *Hectique* Feaver, which is alſo a very dangerous ſickneſſe, you ſhall take the oyl of Violets, and mix it with a good quantity of the powder of white *Poppy-ſeed* finely ſearſt, and therewith annoint the ſmall and reins of the parties back, evening and morning, and it will not only give eaſe to the Feaver, but alſo purge and cleanſe away the dry ſcalings, which is ingendred either by this, or any other Feaver whatſoever. Of the Fever hectique.

For the quartan or for any fever.

For any feaver whatſoever, whoſe fit beginneth with a cold, Take a ſpoonful and a half of Dragon water, a ſpoonful of Roſe-water, a ſpoonful of running-water a ſpoonful of *Aquavitæ*, a ſpoonful of Vinegar, and half a ſpoonful of *Mithridate*, or leſſe, and beat all theſe well together, and let the party drink it before his fit begin.

Of thirſt in fevers.

It is to be underſtood, that all feavers of what kind ſoever they be, and theſe infectious diſeaſes, as Peſtilence, Plague, and ſuch like, are thought the inflammation of the blood, and infinitely much ſubject to drought; ſo that, ſhould the party drink ſo much as he deſired, neither could his body containe it, nor could the great abundance of drink do other then weaken his ſtomack, and bring his body to certaine deſtruction.

Wherefore when any man is ſo overpreſſed with deſire of drink, you ſhall give him at convenient times, either poſſet ale made with cold herbs, as ſorrel, purſlin, Violet leaves, Lettice, Spinnage, and ſuch like, or elſe a Julip made as hereafter, in the peſtilent feaver, or ſome Almond milk; and betwixt thoſe times, becauſe the uſe of theſe drinks will grow wearieſome and loathſome to the patient, you ſhall ſuffer him to gargle in his mouth good wholſome beer or ale, which the patient beſt liketh, and having gargled it in his mouth, to ſpit it out again, and then to take more: and thus to do as oft as he pleaſeth, till his mouth be cooled: provided, that by no means he ſuffer any of the drink to go down; and this will much better aſſwage the heat of his thirſt, then if he did drink; and when apperite deſireth drink to go down, then let him take either his Julip or his Almond milk.

For any ague ſore.

To make a pultis to cure any ague-ſore, take elder leaves, and ſeeth them in milk till they be ſoft, then take them up and ſtrain them, and then boil it again till it be thick, and ſo uſe it to the ſore as occaſion ſhall ſerve.

The quartane Fever.

For the Quartain Feaver, or third day ague, which is of all Feavers the longeſt laſting, and many times dangerous Conſumptions, black Jaundies, and ſuch like mortal ſickneſſes follow it: you ſhall take Mithridate, and ſpread it upon a Lemon ſlice, cut of a reaſonable thickneſſe, and ſo as the Lemon be

be covered with the Mithridate; then bind it to the pulſe of the ſick mans wriſt of his arm, about an hour before his fit doth begin, and then let him go to his bed made warm, and with hot cloaths laid upon him, let him try if he can force himſelfe to ſweat; which if he do, then half an hour after he hath ſweat, he ſhall take hot poſſet-ale brewed with a little Mithridate, and drink a good draught thereof, and reſt till his fit be paſſed over: but if he be hard to ſweat, then with the ſaid poſſet ale, alſo you ſhall mix a few bruiſed Aniſeeds, and that will bring ſweat upon him: and thus you ſhall do every fit, till they begin to ceaſe, or that ſweat come naturally of its own accord, which is a true and manifeſt ſign that the ſickneſſe decreaſeth. To make a ſweat.

For the Peſtilent Feaver which is a continuall ſickneſſe full of infection and mortality, you ſhall cauſe the party firſt to be let blood, if his ſtrength will bear it: then you ſhall give him cool Julips made of Endive or Succory water, or the ſyrop of Violets, conſerve of Barberies, and the juyce of Lemons wel mixed and ſymbolized together. The peſtilent feaver.

Alſo you ſhall give him to drink Almond-milk, made with the decoction of cool herbs, as Violet leaves, ſtrawberry leaves, french mallowes, purſline, and ſuch like; and if the parties mouth ſhall through the heat of his ſtomack, or liver, inflame, or grow ſore, you ſhall waſh it with the ſyrrop of Mulberries, and that will not only heal it, but alſo ſtrengthen his ſtomack. If (as it is moſt common in this ſickneſſe) the party ſhall grow coſtive, you ſhall give him a ſuppoſitory made of honey, boyld to the height of hardneſſe, which you ſhall know by cooling a drop thereof, and ſo if you find it hard, you ſhall then know that the honey is boyl'd ſufficiently; then put ſalt to it, and ſo put it in water, and work it into a roul in manner of a ſuppoſitory, and adminiſter it, and it moſt aſſuredly bringeth no hurt, but eaſe to the party, of what age or ſtrength ſoever he be: during his ſickneſſe you ſhall keep him from all manner of ſtrong drinks, or hot ſpices, and then there is no doubt of his recovery.

To preſerve your body from the infection of the plague, you ſhall take a quart of old ale, and after it hath riſen upon A preſervation againſt the plague.

the fire, and hath been ſcummed, you ſhall put thereinto of *Ariſtoloch a longa*, of *Angelica*, and of *Celandine*, of each half a handful, and boyl them well therein; then ſtrain the drink through a clean cloath, and diſſolve therein a dram of the beſt *Mithridate*, as much *Ivory* finely powdered and ſearſt, and ſix ſpoonfuls of *Dragon* water, then put it up in a cloſe glaſſe; and every morning faſting, take five ſpoonfuls thereof, and after bite and chaw in your mouth, the dried root of *Angelica*, or ſmell on a noſegay, made of the taſſeld end of a ſhip rope, and they will ſurely preſerve you from infection.

For infection of the plague

But if you be infected with the plague, and feel the aſſured ſigns thereof, as pain in the head, drought, burning, weakneſſe of ſtomack, and ſuch like: Then you ſhall take a dram of the beſt *Mithridate*, and diſſolve it in three or four ſpoonfulls of *Dragon* water, and immediately drink it off, and then with hot cloaths or bricks made extream hot, and laid to the ſoles of your feet; after you have been wrapt in woolen cloaths, compel your ſelfe to ſweat, which if you do, keep your ſelfe moderately therein, till the ſore begin to riſe; then to the ſame apply a live pidgeon cut in two parts, or elſe a plaiſter made of the yolk of an egg, hony, herb of grace chopt exceeding ſmall, and wheat flower, which in very ſhort ſpace will not only ripen, but alſo break the ſame without any other inciſion; then after it hath run a day or two, you ſhall apply a plaiſter of *Milelot* unto it, untill it be whole.

For the Peſtilence.

Take *Fetherfew*, *Maleſ-lot*, *Scabious*, and *Mugwort*, of each a like, bruiſe them and mix them with old ale, and let the ſick drink thereof ſix ſpoonfuls, and it will expell the corruption.

Another.

Take *Yarrow*, *Tanſie*, *Fetherfew*, of each a handfull, and bruiſe them well together, then let the ſick party make water in the herbs, then ſtraine them, and give it the ſick to drink.

A preſervation againſt the peſtilence.

Take of *Sage*, *Rue*, *Brier leaves*, or *Elder leaves* of each an handfull, ſtamp them and ſtrain them with a quart of white wine, and put thereto a little Ginger, and a good ſpoonfull of the beſt *Treacle*, and drink thereof morning and evening.

Take

How to draw the Plague down to any place you wil.

Take *Smallage*, *Mallowes*, *Wormwood* and *Rue* ſtamp them well together, and fry them in *oyl Olive*, till they be thick, plaiſter-wiſe apply it to the place where you would have it riſe, and let it lie untill it break, then to heal it up, take the juyce of *Smallage*, *Wheat flower*, and milk, and boil them to a pultis, and apply it morning and evening till it be whole.

A Cordial for any infection at the heart.

Take of *Burrage*, *Langdebeef*, and *Calamint*, of each a good handfull, of *Harts tongue*, *Red mint*, *Violets*, and *Marigolds*, of each half a handfull, boyl them in white wine, or fair running water, then add a penny worth of the beſt *Saffron*, and as much *Sugar*, and boyl them over again well, then ſtrain it into an earthen pot, and drink thereof morning and evening, to the quantity of ſeven ſpoonfuls.

Againſt too violent ſweating.

Take *Linſeed* and *Lettice*, and bruiſe it well, then apply it to the ſtomack, and remove it once in four hours.

For the head-ach.

For the Head-ach, you ſhall take of *Roſe-water*, of the juice of *Camomil*, of *Womans milk*, of ſtrong *wine vinegar*, of each two ſpoonfuls, mixe them together well upon a chaffing diſh of coals; then take a piece of a dry *Roſe-cake*, and ſteep it therein, and as ſoon as it hath drunk up the liquor, and is throughly hot, take a couple of ſound *Nutmegs*, grated to powder, and ſtrew them upon the roſe cake, then breaking it into two parts, bind it on each ſide, upon the temples of the head, ſo let the party lie down to reſt, and the pain will in a ſhort ſpace be taken from him.

For the Frenzy.

For *Frenzy*, or inflammation of the cauls of the brain, you ſhall cauſe the juyce of *Beets* to be with a Syringe ſquirted up into the patients noſtrils, which will purge and cleanſe his head exceedingly; and then give him to drink poſſet ale, in which *Violet* leaves and *Lettice* hath been boyled, and it will ſuddenly bring him to a very temperate mildneſſe, and make the paſſion of the Frenzy forſake him.

For the Lethargy.

For the *Lethargy*, or extream drowſineſſe, you ſhall by all violent means, either by noiſe or other diſturbances, force perforce keep the party from ſleeping; and whenſoever he calleth for drink, you ſhall give him white wine and *Iſop* water, of each a little quantitity mixt together, and not ſuffer him to

ſleep above four hours in four and twenty, till he come to his former wakefulneſſe, which as ſoon as he hath recovered, you ſhall then forthwith purge his head with the juyce of *Beets* ſquirted up into his noſtrils, as it is before ſhewed.

To provoke ſleep. But if any of the family be troubled with too much watchfulneſſe, ſo that they cannot by any means take reſt, then to provoke the party to ſleep, you ſhall take of *Saffron*, a Dram dryed and beaten to powder, and as much *Lettice ſeed* alſo dryed and beaten to powder, and twice as much *Poppy ſeed* beaten alſo to powder, and mixe theſe with womans milk, till it be a thick ſalve, and then bind it to the temples of the head, and it will ſoon cauſe the party to ſleep, and let it lie on not above four hours.

For the ſwimming of the head. For the ſwimming or dizzing in the head you ſhall take of *Agnus caſtus*, of *Broom wort*, and of *Camomile* dried, of each two drams mixt with the juyce of *Ivy*, oil of Roſes, and white wine, of each a like quantity, till it come to a thick ſalve, and then bind it to the temples of the head, and it will in ſhort ſpace take away the grieſe.

For the palſie For the Apoplexy or Palſie, the ſtrong ſcent or ſmell of a Fox is exceeding ſoveraign, or to drink every morning halfe a pint of the decoction of Lavender, and to rub the head every morning and evening exceeding hard, with a very clean courſe cloath, whereby the humours may be diſſolved and diſperſt into the outward parts of the body: by all means for this infirmity, keep your feet ſafe from cold or wet, and alſo the nape of your neck; for from thoſe parts it firſt getteth the ſtrength of evill and avoidable pains.

For a new cough. For a cough or cold but lately taken, you ſhall take a ſpoonful of Sugar finely beaten and ſearſt, and drop into it of the beſt *Aquavitæ*, untill all the Sugar be wet through, and can receive no more moiſture: then being ready to lie down to reſt, take and ſwallow the ſpoonful of Sugar down, and ſo cover you warm in your bed, and it will ſoon break and diſſolve the cold. But if the cough be more old and inveterate, and more inwardly fixt to the lungs, take of the powder of Bettony, of the powder of Carraway ſeeds, of the powder of Shervit dried, of the powder of *Hounds tongue*, and of *Pepper* finely beaten

For an old cough.

beaten, of each two drams, and mingle them well with clarified *Honey*; make an electuary thereof and drink it morning and evening for nine dayes together; then take of *Sugar candy* coarſly beaten, an ounce of *Licoras* finely pared and trimmed, and cut into very little ſmall ſlices, as much of *Anſeeds*, and *Coriander ſeeds*, halfe an ounce, mix all theſe together, and keep them in a paper in your pocket, and ever in the day time when the cough offendeth you, take as much of this dredg as you can hold between your thumb and fingers, and eat it, and it will give eaſe to your grief: and in the night when the cough taketh you, take of the juyce of *Lycoras*, as much as two good barley corns, and let it melt in your mouth, and it will give you eaſe.

For the falling ſickneſſe.

Although the falling ſickneſſe be ſeldome or never to be cured, yet if the party which is troubled with the ſame, will but morning and evening, during the wane of the moon, or when ſhe is in the ſign *Virgo*, eat the berries of the herb *Aſterton*, or bear the herbs about him next to his bare skin, it is likely he ſhall find much eaſe, and fall very ſeldome, though this medicine be ſomewhat doubtful.

For the falling evill.

For the falling-evill; take, if it be a man, a female *mole*; if a woman, a male *mole*, and take them in *March*, or elſe *April*, when they go to the Buck; then dry it in an oven, and make powder of it whole as you take it out of the earth, then give the ſick perſon of the powder to drink evening and morning for nine or ten daies together.

An Oyl to help hearing.

To take away deafneſſe, take a gray Eele with a white belly, and put her into a ſweet earthen pot quick, and ſtop the pot very cloſe with an earthen cover, or ſome ſuch hard ſubſtance: then dig a deep hole in a horſe dunghill, and ſet it therein, and cover it with the dung, and ſo let it remain for a fortnight, and then take it out and clear out the oyl which will come of it, and drop it into the imperfect ear, or both, if both be imperfect.

For the rhume.

To ſtay the flux of the Rhume, take Sage and dry it before the fire, and rub it to powder, then take bay ſalt and dry it, and beat it to powder, and take a Nutmeg and grate it, and mixe them altogether, and put them in a long linnen bag, then heat it upon a tile ſtone, and lay it to the nape of the neck.

For

For a ſtinking breath.

For a ſtinking breath, take Oak buds when they are new budded out, and diſtil them, then let the party grieved nine mornings, and nine evenings, drink of it; then forbear a while, and after take it again.

A vomit for an ill breath.

To make a vomit for a ſtrong ſtinking breath, you muſt take of *Antimonium* the weight of three barley corns, and beat it very ſmall, and mixe it with conſerve of Roſes, and give the Patient to eat in the morning, then let him take nine dayes together the juyce of Mints and Sage, then give him a gentle purgation, and let him uſe the juyce of Mint and Sage longer. This medicine muſt be given in the ſpring of the year; but if the infirmity come for want of digeſtion in ſtomack, then take *Mints*, *Marjoram* and *Wormwood*, and chop them ſmall, and boyl them in *Malmſie* till it be thick, and make a plaiſter of it, and lay it to the ſtomack.

For the tooth-ach.

For the *Tooth-ach*, take a handful of *Daiſie roots*, and waſh them very clean, and dry them with a cloath, and then ſtamp them: and when you have ſtamped them a good while, take the quantity of half a nut-ſhel full of bay ſalt, and ſtrew it amongſt the roots, and then when they are very well beaten, ſtrain them through a clean cloath; then grate ſome *Calamus Aromaticus*, and mix it good and ſtiffe with the juyce of the roots, and when you have done ſo, put it into a quill, and ſnuff it up into your noſe, and you ſhall find eaſe.

Another.

Another for the *Tooth-ach*, take ſmall *Sage*, *Rue*, *Smallage*, *Fetherfew*, *Wormwood*, and *Mints*, of each of them half a handful, then ſtamp them well altogether, putting thereto four drams of *Vinegar*, and one dram of *Bay ſalt*, with a penny worth of good *Aquavitæ*, ſtir them all well together; then put it between two linnen clouts, of the bigneſſe of your cheek, temples, and jaw, and quilt it in a manner of a coorſe imbroydery: then ſet it upon a chafing diſh of coals, and as hot as you may abide it, lay it over the ſide where the pain is, and lay you down upon that ſide, and as it cools warme it againe, or elſe have another ready warm to lay on.

A drink for a pearl in the eye.

To make a drink to deſtroy any pearle or film in the eye: take a good handful of Marigold plants: and a handful of Fennel, as much of May-weed, beat them together, then ſtrain them with a

pint

pint of beer, then put it into a pot and ſtop it cloſe, that the ſtrength may not goe out: then let the offended party drinke thereof when he is in bed, and lye of that ſide on which the pearl is, and likewiſe drink of it in the morning next his heart when he is riſen.

For pain in the eyes, take Milke when it comes new from the Cow, and having filled it into a clean veſſel, cover it with a pewter diſh, and the next morning take off the diſh, and you ſhall ſee a dew upon the ſame, with that dew waſh the pained eyes and it will eaſe them. For pain in the eyes.

For dim eyes, take Wormwood beaten with the gall of a Bull, and then ſtrain it, and annoynt the eyes therewith, and it will clear them exceedingly. For dim eyes.

For ſore eyes, or blood-ſhotten eyes; take the white of an egge beaten to oyle, as much Roſe water, as muck of the juyce of Houſleek, mixe them well together, then dip flats, pleagants therein, and lay them upon the ſore eyes, and as they dry, ſo renew them again and wet them; and thus do, till the eyes be well. For ſore eyes.

For watery eyes, take the juyce of *Affodill*, *Mirrhe*, and *Saffron* of each a little, and mixe it with twice ſo much white wine, then boyl it over the fire, then ſtrain it and waſh the eye therewith, and it is a preſent help. For watery eyes.

For a Canker, or any ſore mouth; take Chervile and beat it to a ſalve with old Ale and Allom water, and annoynt the ſore therewith and it will cure it. For a Canker.

For any ſwelling in the mouth, take the juyce of Wormwood, Cammomil, and Shirwit, and mixe them with hony, and bath the ſwelling therewith and it will cure it. A ſwelled mouth.

For the Quinſie or Squinancy, give the party to drink the herb *Mouſ-ear* ſteept in ale or beer, and look where you ſee a Swine rub himſelf, and there upon the ſame place rub a ſleight-ſtone, and then with it ſleight all the ſwelling, and it will cure it. For the quinſie.

If you would not be drunk, take the powder of Bettony and Coleworts mixt together; and eat it every morning faſting, as much as will lye upon a ſixe pence, and it will preſerve a man from drunkenneſs. Againſt Drunkenneſſe.

To

To quicken the Wit.

To quicken a mans wits, ſpirit, and memory; let him take Landebeef, which is gathered in *June* or *July*, and beating it in a clean morter, let him drink the juyce thereof with warm water, and he ſhall find the benefit.

For the King's Evil.

If a man be troubled with the *Kings-evil*, let him take the red *Dock*, and ſeeth it in Wine till it be very tender, then ſtrain it and ſo drink a good draught thereof, and he ſhall find great eaſe from the ſame; eſpecially if he do continue the uſe thereof.

Additions to the particular ſickneſſes; and firſt of the head and the parts thereof, and the lungs.

Take Frankincenſe, Doves dung, and Wheat flowre, of each an ounce and mixe them well with the white of an Egge, then playſterwiſe apply it where the pain is.

The oyl of Lillies, if the head be annoynted therewith, is good for any pain therein.

Another. For the head-ach, and to ſtay bleeding at the Noſe.

Take Rew, and ſteep it in Vinegar a day and a night, the Rew being well bruiſed; then with the ſame annoynt the head twice or thrice a day.

Take the white of an Egge and beat it to oyl, then put it to Roſewater, and the powder of Alablaſter, then take flax and dip it therein, and lay it to the temples, and renew it two or three times a day.

To draw out bones braken in the head.

Take Agrimony and bruiſe it, and playſter-wiſe apply it into the wound, and let the party drink the juyce of Bettony, and it will expell the bones, and heal the wound.

For the falling of the mould of the head.

Take the leaves of Agrimony, and boyl them in hony, till it be thick like a playſter, and then apply it to the wound of the head warm.

The Squinancy.

Take a Table-napkin, or any linnen cloath, and wet it in cold water, and when you go to bed apply it to the ſwelling, and lye upright; thus do three or four times in a night, till the ſwelling waſte.

The Tooth ake.

Take two or three Dock roots, and as many Daiſie roots, and boyl them in water till they be ſoft, then take them out of the water, and boyl them well over again in Oyle Olive, then ſtrain them through a clean cloath, and annoynt the pained tooth therewith. and keep your mouth cloſe, and it will not onely take away the pain, but alſo eaſe any megrim or grief in the head.

To make teeth white.

Take a ſawcer of ſtrong Vinegar, and two ſpoonfulls of the powder

powder of *Roach-allome*, a ſpoonfull of white ſalt, and a ſpoonfull of hony: ſeeth all theſe till it be as thin as water, then put it into a cloſe vial and keep it, and when occaſion ſerves waſh you teeth therewith, with a rough cloath, and rub them ſcundly: but not to leed.

To draw teeth without iron.

Take ſome of the green of the Elder-tree, or the apples of Oak trees, and with either of theſe rub thy teeth and gums, and it will looſen them ſo, as you may take them out.

Teeth that are yellow.

Take Sage and ſalt, of each alike, and ſtamp them well together, then bake it till it be hard, and make a fine powder thereof, then therewith rub the teeth evenings and mornings, and it will take away all yellowneſſe.

For teeth that are looſe.

Firſt let them bloud, then take *Harts horn* or *Ivory*, and red *Pimpernel*, and bruiſe them well together; then put it into a linnen cloath, and lay it to the teeth, and it will faſten them.

For any venome in the ear.

Take the juyce of *Lovage*, and drop it into the ear, and it will cure any venome, and kill any worm, ear-wig, or other vermine.

For a ſtinking breath which commeth from the ſtomach.

Take two ounces of *Cumine*, and beat it in a morter to fine powder; then boyl it in white wine from a pottle to a quart, then drink thereof morning and evening as hot as you can ſuffer: or otherwiſe, take an ounce of wild *time*, and being clean waſhed, cut it ſmall, and then powder it; then put to it half an ounce of *pepper* in fine powder, and as much *Comine*, mixe them all well together and boyl them in a pottle of white Wine, till half be conſumed, and after meal (but not before) uſe to drinke thereof hot, alſo once in the afternoon, and at your going to bed; and it will purge the breath.

For ſtinking noſtrils.

Take red Nettles and burn them to powder; then adde as much of the powder of Pepper, and mixe them very well together and ſnuffe thereof up into the noſe, and thus do divers times a day.

For a Canker in the noſe.

Take old Ale, and having boyled it on the fire, and cleanſed it, adde thereto a pretty quantity of life hony, and as much Allome, and then with a ſerringe or ſuch like, waſh the ſores therewith very warm.

A red water for any canker.

Take a gallon of running water, and boyl it to a pottle; then put

put to it a handful of red Sage a handfull, of Celladines, a handfull, of Hony-ſuckles, a handfull of Woodbine leaves and flowrs; then take a pennyworth of grains made into fine powder, and boyl all very well together: then put to it a quart of the beſt life-hony of a year old, and a pound of Roch Allom, let all boyl together till it come to a pottle, then ſtrain it and put it into a cloſe veſſel, and therewith dreſſe and annoynt the ſores as occaſion ſerves: it will eaſe any canker or Ulcer, and cleanſe any wound; it is beſt to be made at *Midſummer*.

To clear the eyes. Take the flowres and roots of *Primroſes* clean waſht in running water, then boyl them in fair running water till the ſpace of an hour, then put thereto a pretty quantity of white *Copperas*, and then ſtrain all through a linnen cloath, and ſo let it ſtand a while and there will an oyl appear upon the water, with that oyl annoynt the lids and the browes of your eyes, and the temples of your head, and with the water waſh your eyes, and it is moſt ſoveraign.

Another for the ſight. Take fifteen ſeeds of *Gyneper*, and as many *Gromwell* ſeeds, five branches of *Fennel*, beat them altogether, then boyl them in a pint of old Ale, till three parts be waſted; then ſtrain it into a glaſſe, and drop thereof three drops into each eye at night, and waſh your eyes every morning for the ſpace of fifteene dayes with your own water, and it will clear any decayed ſight whatſoever.

For ſore eyes. Take red Snales, and ſeeth them in fair water, and then gather the oyl that ariſeth thereof, and therewith annoynt your eyes morning and evening.

For ſick eyes. Take a gallon or two of the dreggs of ſtrong Ale, and put thereto a handfull or two of *Comine*, and as much ſalt, and then diſtill it in a Limbeck, and the water is moſt precious to waſh Eyes with.

For bleered eyes. Take Celladine, Rue, Chervile, Plantain, Anniſe, of each alike and as much *Fennel* as of all the reſt, ſtamp them all well together, then let it ſtand two dayes and two nights, then ſtrain it very well and annoynt your eyes morning and evening therewith.

For the pin and web in the eye. Take an egge, and roaſt it extream hard, then take the white being very hot, and lap in it as much white Copperas as a peaſe,

peaſe, and then violently ſtrain it through a fine cloath, then put a good drop thereof into the eye, and it is moſt ſoveraign.

Take two drams of prepared Tuſſia, of Sandragon one dram, of Sugar a dram, bray them all well together till they be exceeding ſmall, then take of powder, and blow a little thereof into the eye. and it is ſoveraign — A powder for the pin and web in the eyes.

Take of red Roſe leaves, of Smallage, of Maiden hair, Euface, Endive, Succory, red Fennel, Hil-wort, and Cellandine, of each halfe a quarter of a pound, waſh them clean, and lay them in ſteep in white wine a whole day; then diſtill them in an ordinary Salt, and the firſt water will be like gold, the ſecond like ſilver, and the third like balm; any of theſe is moſt precious for ſore eyes, and hath recovered ſight loſt for the ſpace of ten years, having been uſed but four dayes. — A precious water for the eyes.

Take the leaves of willow, and boil them well in oyl, and therewith anoint the place where you would have any hair to grow, whether upon head or beard. — To make hair to grow.

Take Treacle water and hony, boil them together, and wet a cloath therein, and lay it where you would have hair to grow, and it will come ſpeedily. — Another.

Take nine or ten eggs, and roſt them very hard, then put away the yolkes; and bray the whites very ſmall, with three or four ounces of white Copperas, till it be come to perfect oyntment, then with it annoint the face morning and evening, for the ſpace of a week and more. — For a pimpled or red ſawcy face.

Take the rind of Hyſop, and boil or burn it, and let the fume or ſmoak go into the mouth, and it will ſtay any rhume falling from the head. — For the rheum.

Take a pint of running water, and three ſpoonfuls of hony, and boyl them together: and ſcum off the filth, then put thereto one ounce of ſmall Rayſins, and ſtrain it well through a cloath, and ſo drink it morning and evening. — For hoarſneſs in the throat.

Take Aquavitæ and ſalt, and mix it with ſtrong old Ale, and then heat it on the fire, and therewith waſh the ſoles of the feet when you go to bed. — For a dangerous cough.

Take of clean wheat, and of clean barly, of each a like quantity, and put them into a gallon and a half of fair water, and boil — For a dry cough.

them till they burſt, then ſtrain it into a clean veſſel, and add thereto a quartern of fine *Lycoras* powder, and two penny worth of *gumme Arabick*, then boyl it over again and ſtrain it, and keep it in a ſweet veſſel, and drink thereof morning and evening.

For the tiſick. Take the beſt wort, and let it ſtand till it be yellow, then boyl it, and after let it cool, then put to it a little quantity of *Barm* and *Saffron*, and ſo drink of it every morning and evening while it laſteth: otherwiſe, take *Hore bound*, *Violet leaves*, and *Iſop*, of each a good handfull, ſeeth them in water, and put thereto a little *Sugar*, *Lycoras*, and *Sugar-candy*, after they have boiled a good while, then ſtrain it into an earthen veſſel, and let the ſick drink thereof ſix ſpoonfuls at a time morning and evening; or laſtly, take the lungs of a Fox, and lay it in roſe water, or boyl it in roſe water, then take it out, and dry it in ſome hot place without the ſun; then beat it to powder with *Sugar candy*, and eat of this powder morning and evening.

For griefs in the ſtomack. To eaſe the pain in the ſtomack, take *Endive*, *Mints*, of each a like quantity, and ſteep them in white wine a dayes ſpace; then ſtraining and adding thereunto a little *Cynamon* and *Pepper*, give it to the ſick perſon to drink, and if you add thereto a little of the powder of *Horſe mint* and *Calamint*, it will comfort the ſtomack exceedingly, and occaſion ſwift and good digeſtion.

For ſpitting of blood. For ſpitting of blood, whether it proceed of inward bruiſes, overſtraining, or ſuch like; you ſhall take ſome *pitch*, and a little *Sperma Cæti*, and mix it with old Ale, and drink it, and it will ſtay the flux of blood: but if by means of the bruiſe, any outward grief remain; then you ſhall take the herb *Brokelhemp*, and fry it with ſheeps tallow, lay it hot on the grieved place, and it will take away the anguiſh.

For vomiting To ſtay the fluxe or vomiting, take *Wormwood*, and ſour bread toſted, of each a like quantity, and beat them well in a morter; then add to them as much of the juice of *Mints*, and the juice of *Plantain*, as will bring it to a thick ſalve: then fry them altogether in a frying pan, and when it is hot, lay it plaiſterwiſe to the mouth of the ſtomack; then let the party drink a little white wine and *Chervile* water mixt together, and then ſteep ſome toaſted bread in very ſtrong vinegar, wrap it in a fine cloath, and let

let the ſick party ſmell thereto, and it will ſtay the exceſſe of vomiting, and both comfort and ſtrengthen the ſtomack.

If you would compell one to vomit, take half a ſpoonfull of Stone crop, and mix it with three ſpoonfuls of white wine, and give it to the party to drink, and it will make him vomit preſently; but do this ſeldome, and to ſtrong bodies, for otherwiſe it is dangerous. To force one to vomit.

For the *Iliaca paſſio*, take of Polypody an ounce, and ſtampt it; then boyl it with Prunes and Violets, in Fennel water, or Anniſeed water; take thereof a good quantity; then ſtrain it, and let the party every morning and evening drink a good draught thereof. For the Iliaca paſſio.

If the ſtomack be troubled with wind or other pain, take Commine, and beat it to powder, and mixe with it red wine, and drink it at night when you go to bed divers nights together. Additions to the diſeaſes of the ſtomack.

Take Brooklime-root and leaves, and waſh them clean, and dry them in the ſun, ſo dry, that you may make powder thereof, then take of the powder a good quantity, and the like of Treacle, and put them in a cup, with a pretty quantity of ſtrong old Ale, and ſtir them well together, and drink thereof firſt and laſt, morning and evening, for the ſpace of three or four dayes; and if need do require, uſe the ſame in the broaths you do eat, for it is very ſoveraign. For the ſtomack. For the Iliaca paſſio.

Take Harts-horn, or Ivory beaten to fine powder, and as much Cynamon in powder, mix them with Vinegar, and drink thereof, to the quantity of ſeven or eight ſpoonfuls. For pain in the breaſt.

Take the water of Mouſeare, and drink thereof the quantity of an ounce and a halfe, or two ounces, twice or thrice a day: or otherwiſe take a little Nutmeg, a little Cloves, a little Mace, and a very little Ginger, and the flowers of Lavender, beat all unto a fine powder, and when the paſſion of the Mother commeth, take a chafingdiſh of good hot coals, and bend the patient forward, and caſt of the powder into the chafingdiſh, ſo as ſhe may receive the ſmoak both in at her noſe and mouth, and it is a preſent cure. The mother.

Againſt obſtructions in the Liver, take Anniſeeds, Ameos, Burnet, Camomile, and the greater Centaury, and boyl them in white Obſtructions of the Liver.

wine with a little honey, and drink it every morning, and it will cure the obſtructions, and cleanſe the Liver from all imperfection.

Againſt the heat of the Liver.

Againſt the heat and inflammation of the Liver, take Endive dryed to powder, and the meal of *Lupin* ſeeds, and mix it with Honey, and the juyce of Wormwood, make a cake thereof, and eat it, and it will aſſwage the great heat and inflammation of the Liver, and take away the pimples and redneſſe of the face, which proceedeth from the ſame.

For the Pluriſie.

To prevent a pluriſie a good while before it come, there is no better way then to uſe much the exerciſe of ringing, or to ſtretch your arms upward, ſo as they may bear the weight of your body, and ſo ſwing your body up and down a good ſpace; but having caught a Pluriſie, and feeling the gripes, ſtitches, and pangs thereof, you ſhall preſently cauſe the party to be let blood, and then take the herb *Althea*, or Holyhock, and boyl it with Vinegar and Linſeed, till it be thick plaiſter-wiſe, and then ſpread it upon a piece of Allom-leather, and lay it to the ſide that is grieved, and it will help it.

A play ſter for a ſtitch.

To help a ſtitch in the ſide, or elſewhere, take Doves dung, red Roſe leaves, and put them into a bag, and quilt it: then throughly heat it upon a chafingdiſh of coals, with vinegar in a platter: then lay it upon the pained place, as hot as may be ſuffered, and when it cooleth, heat it again.

Heat in the Liver.

For any extraordinary heat or inflammation in the Liver, take Barberies, and boyl them in clarified whey, and drink them and they will cure it.

For the conſumption.

If you will make a Cordiall for a Conſumption, or any other weakneſſe, take a quart of running water, a piece of Mutton, and a piece of Veal, and put them with the water into a pot; then take of Sorrel, Violet leaves, Spinage Endive, Sucory, Sage, Iſop, of each a good quantity; then take Prunes and Raiſins, and put them all to the broth, and ſeeth them from a quart to a pint; then ſtrain the yolk of an egg, and a little Saffron thereinto, putting in Sugar, whole Mace, and a little white wine; ſo ſeeth them a while together, and let the party drink it as warm as may be.

To ſtaunch Blood.

To ſtaunch blood, take the herb Shepherds purſe, (if it may be gotten) diſtilled at the Apothecaries, and drink an ounce thereof at a time, morning and evening, and it will ſtay any flux

of

of blood naturall or unnaturall, but if you cannot get diſtilled water, then boyl a handfull of the herbe with Cynamon, and a little Suger, in Claret wine, and boyl it from a quart to a pint, and drink it as oft as you pleaſe: alſo, if you do but rub the herbe between your hands, you ſhall ſee it will ſoon make the blood returne.

For the Yellow Jaundiſe, take two penny worth of the beſt Engliſh Saffeon, dry it and grind it to exceeding fine powder; then mixe it with the pap of a roſted Apple, & give it the diſeaſed party to ſwallow down in manner of a pill, and thus do divers mornings together, and without doubt it is the moſt preſent cure that can be for the ſame, as hath been often times proved. For the yellow jaundiſe.

For the Yellow Jaundiſe, take Pimpernel and Chick weed ſtamp them and ſtrain them into poſſet Ale; and let the party drinke thereof morning and evening.

For the yellow Jaundiſe, which is deſperate, and almoſt paſt cure: Take ſheeps dung new made, and put it into a cup of beer or Ale and cloſe the cup faſt, and let it ſtand ſo all night, and in the morning take a draught of the cleereſt of the drink, and give it unto the ſick party.

For the Black Jaundiſe, take the herb called penny royall, and either boyl it in white Wine, or drink the juyce thereof ſimply by it ſelf, to the quantity of three or four ſpoonfull at a time, and it will cure the black Jaunniſe. For the black jaundiſe.

Take of Hyſop, Parſly, and Harts-tongue, of each alike quantity, and ſeeth them in wort till they be ſoft, then let it ſtand till it be cold, and then drink thereof firſt and laſt, morning and evening. Additions for the diſeaſes of the Liver.

Take Fennel rootes, and parſly roots of each alike, waſh them clean and pill off the upper bark, and caſt away the pith within; then mince them ſmall; then put them to three pints of water, and ſet them over the fire; then take figs and ſhred them ſmall, take Lycoras and break it ſmall, and put them to the herbs, and let all boyl very well, then take Sorrell and ſtamp it and put it to the reſt, and let it boyl till ſome part be waſted, then take a good quantity of hony and put to it and boyl a while, then take it from the fire, and clarify it through a ſtrainer into a glaſs veſſel, and ſtop it very cloſe; then give the ſick to drinke For waſting of the Liver.

thereof morning and evening.

To heal a Ring-worm Comming of the heat of the Liver.

Take the ſtalk of Saint *Mary Garlick*, and burn it, or lay it upon a hot tyle ſtone untill it be very dry, and then beat it into powder, and rub the ſore therewith untill it be whole.

To ſtanch blood.

Take Wool in the Walkmilt that commeth from the cloth and flyeth about like Doun and beat it into powder; then take thereof and mixe it with the white of an egge and wheat flowre, and ſtamp them together: then lay it on a linnen cloath or lint, and apply it to the bleeding place, and it will ſtanch it.

For great danger in bleeding.

If a man bleed and have no preſent help, if the wound be on the foot, bind him about the ankle; if in the legs, bind him about the knee; if it be on the hand, bind him about the wriſt; if it be on the arm, bind him about the brawn of the arm, with a good lift and the blood will preſently ſtanch.

For a ſtitch.

Take good ſtore of *Cinamon* grated, and put it into poſſet ale very hot and drink it, and its a preſent cure.

A bath for the Leproſie.

Take a gallon of running water; and put to it as much ſalt as will make the water as ſalt as the Sea-water, then boyl it a good while, and bath the leggs therein as hot as may be ſuffered.

For the Dropſie.

For the Dropſie, take *Agnus caſtus*, *Fennel*, *Affodil*, dark *Wallwort*, *Lupins* and *Wormwood*, of each a handfull, and boyl them in a gallon of white Wine untill a fourth part be conſumed: then ſtraine it and drinke it morning and evening half a pint thereof, and it will cure the Dropſie; but you muſt be carefull that you take not *Daffodil* for *Affodil*.

Pain in the Spleen.

For pain in the Spleen, take *Agnus caſtus*, *Agrimony*, *Aniſeeds*, *Centaury* the great, and *Wormwood*, of each a handfull, and boyle them in a gallon of white Wine, then ſtrain it, and let the patient drink divers mornings together halfa pint thereof; and at his uſual meals let him neither drink Ale, Beer, nor Wine, but ſuch as hath had the hearb *Tamariske* ſteeped in the ſame, or for want of the herb, let him drink out of the cup made of *Tamariske* wood and he ſhall find remedy.

Pain in the Liver.

For any pain in the ſide, take *Mugwort* and red Sage, and lay it them betweed two tyle ſtones, and then put it into a bag, and dry to your ſide as hot as can be indur'd.

For fatneſſe and ſhort breath.

To help him that is exceeding fat, purſie, and ſhort breathed: take hony clarified, and bread unleavened, and make toaſts of it, and

and dip the toaſts in the clarified honey, and eat this divers mornings with your meat.

Take a lump of Iron or Steel and heat it red hot, and quench it in Wine, and then give the wine to the ſick party to drink. Additions. To the diſeaſes of the Spleen.

Take *Fennel ſeeds* and the roots, boyl them in water, and after it is cleanſed put to it honey, and give the party to drink; then ſeeth the herb in Oyl and Wine together, and playſterwiſe apply it to the ſide. For ſtopping of the ſpleen.

Make a playſter of *Wormwood* boyled in Oyle, or make an oyntment of the juyce of *Wormwood*, of *Vinegar*, *Armoniack*, *Waxe*, and *Oyl*, mixed and melted together, and anoynt the ſides therewith, either in the Sun, or before the fire. Diſeaſes of the heart.

Take the powder of *Galingal*, and mixe it with the juyce of *Burrage*, and let the offended party drink it with ſweet wine. For paſſion of the heart.

Take *Roſemary* & *Sage*, of each a handfull, & ſeeth them in white Wine or ſtrong Ale, and then let the patient drink it luke-warme. For heart ſickneſs.

Take the juyce of *Fennell* mixt with hony, and ſeeth them together till it be hard, and then eat it evening and morning, and it will conſume the fatneſſe. For fatneſs about the heart.

For the *Wind collick*, which is a diſeaſe both generall, and cruel, there be a world of remedies, yet none more approved than this which I will repeat: you ſhall take a *Nutmeg* found and large, and divide it equally into four quarters: the firſt morning aſſoon as you ſhall riſe, eat a quarter thereof; the ſecond morning two quarters, and the third eat three quarters, and the fourth morning eat a whole *Nutmeg*: and ſo having made your ſtomach & taſte familier therewith, eat every morning whilſt the *Collick* offendeth you, a whole *Nutmeg* dry without any compoſition, and faſt ever an hour at leaſt after it, and you ſhall find a moſt unſpeakable profit which will ariſe from thoſe nuts. For the Wind-Collick.

For the *Wind collick*, take a good handfull of clean Wheat meal as it commeth from the Mill, and two egges, and a little *Wine-vinegar*, and a little *Aquavitæ*, and mingle them together cold, and make a cake of it, and bake it on a gridyron with a ſoft fire, and turn it often, and tend it with blaſting of *Aquavitæ* with a feather; then lay it ſomewhat higher then the pain is, rather then lower. The wind Collick.

For the *Lask* or extreame ſcouring of the belly, take the ſeeds For the Laske.

of the Wood-roſe, or Bryer-roſe, beat it to powder, and mixe a dram thereof with an ounce of the conſerve of Sloes, and eat it and it will in a ſhort ſpace bind and make the belly hard.

For the bloody flux. For the bloody flux, take a quart of red wine, and boyl therein a handfull of Shepheards purſe, till the hearb be very ſoft: then ſtrain it, and adde thereto a quarter of an ounce of Cynamon, and as much of dryed Tanners bark taken from the Ouze, and both beaten to fine powder; then give the party half a pint thereof to drink morning and evening, it being made very warm, and it will cure him.

To ſtay a lask. To ſtay a ſore Lask, take Plantain water and Cynamon finely beaten, and the flowres of Pomgranates, and boyl them well together; then take Suger & the yolk of an egge, and make a candle of it, and give the grieved party it.

For the flux. For the Flux take Stags pizzel dryed and grated, and give it in any drink, either in Beer, Ale, or Wine, and it is moſt ſoveraign for any Flux whatſoever. So is the jaw bones of a Pike, the teeth and all dryed and beaten to powder, and ſo give the party diſeaſed ſed in any drink whatſoever.

For the worſt Flux. To cure the worſt bloody flux that may be, take a quart of red wine, and a ſpoonfull of Commin ſeed, boyl them together untill half be conſumed; then take Knot-graſs and Shepheards purſe and Plantain, and ſtamp them ſeverall, and then ſtrain them and take of the juyce of each of them a good ſpoonfull and put them to the wine, and ſo ſeeth them again a little: then drink it lukewarm, half over night, and half the next morning; & if it fall out to be in Winter, ſo that you cannot get the herbs, then take the water of the herbs diſtilled, of each three ſpoonfulls, and uſe it as before.

For coſtiveneſs. For extream coſtiveneſs, or binding in the body, ſo as a man cannot avoid his excrements; take Anniſeeds, Fennigreek, Linſeeds, and the Powder of Piony: of each half an ounce, and boyl them in a quart of white Wine, and drink a good draught thereof, and it will make a man go to the ſtool orderly, and at great eaſe.

For worms. For worms in the belly, either of child or man, take Aloes Cicotrine, as much as a half hazel Nut, & wrap it in the pap of a roaſted Apple, and ſo let the offended party ſwallow it in the

manner

manner of a pill faſting in the morning, or elſe mixe it with three or four ſpoonfulls of Muſkadine, and ſo let the party drink it, and it is a preſent cure. But if the child be either ſo young or the man ſo weak with ſickneſſe, that you dare not adminiſter any thing inwardly, then you ſhall diſſolve your Aloes in the oyle of Savine, making it thick like ſalve, then playſterwiſe ſpread it upon Sheeps leather, and lay it upon the navil and mouth of the Stomack of the grieved party, and it will give him eaſe; ſo will alſo unſet Leeks chopt ſmall and fryed with ſweet butter, and then in a linnen bagge apply it hot to the navil of the grieved party.

Take a quart of red wine, and put to it three yolks of eggs, and a penny worth of long Pepper and grains, and boyl it well, and drink it as hot as can be ſuffered: or otherwiſe, take an ounce of the inward bark of an oak, and a penny worth of long Pepper, and boyl them in a pint and better of new Milk, and drink it hot firſt and laſt morning and evening. Additions. To the diſeaſes of the belly and guts. For the greateſt Lax.

Take an egge, and make a little hole in the top, and put out the white, then fill it up again with Aquavitæ, ſtirring the egge and Aquavitæ, till it be hard, then let the party eat the egg and it will cure him, or otherwiſe take a pint of red wine and nine yolks of eggs, and twenty Pepper corns ſmall beaten, let them ſeeth untill they be thick, then take it off, and give the diſeaſed party to eat nine ſpoonfulls morning and evening. For the bloody flux.

Take of Rue and Beets alike quantity, bruiſe them, and take the juyce, mixe it with clarified hony, and boyl it in red wine, and drink it warm firſt and laſt morning and evening. For an eaſie Lask.

Take Mercury, Cinkfoyl, and Mallows, and when you make pottage or broth with other herbs, let theſe herbs before named have moſt ſtrength in the pottage, and eating thereof, it will give you two ſtools and no more. To have two ſtools a day and no more.

Take two ſpoonfull of the juyce of Ivy leaves, and drink it three times a day and it will diſſolve the hardneſſe. For hardneſſe of the belly or womb.

Take the barke of the rootes of the Elder tree, and ſtamp it, and mixe it with old Ale, and drinke thereof a good hearty draught. Againſt coſtiveneſſe.

Take the crummes of white bread, and ſteep it in Milke with Allom, and adde Suger unto it and eate it, and it will open the belly. For the wind collick.

Take

For the ſtopping of the womb.

Take the Kernels of three Peach ſtones, and bruiſe them, ſeven corns of caſe pepper, and ſliced ginger a greater quantity then of the pepper, pound all together groſly, and put it into a ſpoonfull of Sack (which is beſt) or elſe white Wine, or ſtrong Ale, and drink it off in a great ſpoon, then faſt two hours after, and walk up and down if you can; if otherwiſe, keep your ſelfe warm and beware.

For the Rupture.

Take of *Daiſies*, *Cumfrey*, *Polypody* of the Oak, and Avens of each half a handfull, two roots of *Oſmund*, boyl them in ſtrong Ale and Honey, and drinke thereof morning, noone, and night, and it will heale any reaſonable rupture. Or otherwiſe take of *Smallage*, *Comfrey*, *Setwell*, *Polypody*, that grows on the ground like *fearn*, *daiſies* and *mores*, of each alike, ſtamp them very ſmall, and boyl them well in Barm, untill it be thick like a poultis, and ſo keep it in a cloſe veſſel; and when you have occaſion to uſe it, make it as hot as the party can ſuffer it, and lay it to the place grieved, then with a truſſe, truſe him up cloſe, and let him be very carefull for ſtraining of himſelf, and in a few dayes it will knit: during which cure, give him to drink a draught of red wine, and put therein a good quantity of the flowre of fetches, finely boulted, ſtirring it well together, and then faſt an houre after.

For the ſtone.

For the violent pain of the ſtone, make a poſſet of milke and ſack, then take off the curd, and put a handfull of *Cammond* flowrs into the drink, then put it into a pewter pot, and let it ſtand upon hot embers, ſo that it may diſſolve; and then drink it as occaſion ſhall ſerve. Otherwiſe for this griefe, take the ſtone of an Oxe gall, and dry it in an Oven, then beat it to powder, and take of the quantity of a hazel nut, with a draught of good Ale, or white wine.

Another.

The Collick and ſtone.

For the Collick and ſtone, take Hawthorn berries, the berriers of ſweet Bryers, and aſhen Keyes, and dry them every one ſeverally untill you make them into powder, then put a little quantity of every one of them together, then if you think good, put to it the powder of *Licoras* and *Anniſeeds*, to the intent the party may the better take it, then put in a quantity of this powder in a draught of white wine, and drink it faſting. Otherwiſe you may take *Smallage-ſeed*, *Parſley*, *Lovage*, *Saxifrage*, and *broom-ſeed*, of each

Another.

each of them a little quantity, beat them into a powder, and when you feel a fit either of the diſeaſes, eat of this powder a ſpoonfull at a time either in pottage, or elſe in the broath of a chicken, and ſo faſt two or three hours after.

To make a powder for the collick and ſtone, take *fenne'l*, *parſly-ſeed*, *anſeed*, and *carraway-ſeed*, of each the weight of ſixe pence, of *gromwel ſeed*, *ſaxifrage ſeed* the roots of *Alapenda* and *Licoras*, of each the weight of twelve pence, of *galingal*, *ſpikenard*, and *Cinamon*, of each the weight of eightpence, of *Sena* the weight of ſeventeen ſhillings good weight, beat them all to powder and ſearſe it, which will weigh in all twenty five ſhillings and ſix pence. This powder is to be given in white wine and ſugar in the morning faſting, and ſo to continue faſting two hours after: and to take of it at one time the weight of ten pence, or twelve pence. A powder for the Collick and ſtone.

Other Phyſicians for the ſtone, take a quart of Rheniſh or white wine, and two lemons, and pare the upper rind thin, and ſlice them into the wine, and as much white ſoape as the weight of a groat, and boyl them to a pint, and put thereto ſugar according to your diſcretion and ſo drink it, keeping your ſelf warm in your bed, and lying upon your back. Another.

For the ſtone in the reyns, take *Ameos*, *Camomile*, *Maiden hair*, *Sparrow-tongue* and *Philipendula*, each alike quantity, dry it in an oven, and then beat it to powder, and every morning drink half a ſpoonful thereof with a good draught of white wine, and it will help. For the ſtone in the reins.

For the ſtone in the bladder, take a radiſh root and ſlit it croſſe twice, then put it into a pint of white wine and ſtop the veſſel exceeding cloſe: then let it ſtand all one night, and the next morning drink it off faſting, and thus do divers mornings together, and it will help. For the ſtone in the bladder

For the ſtone in the bladder, take the kernels of ſloes, and dry them on a tile ſtone, then beat them into powder, then take the roots of *Alexander*, *parſly*, *pellitory*, and *holihock*, of every of them a like quantity, and ſeeth them all in white wine, or elſe in the broath of a young chicken; then ſtrain them into a clean veſſel, and when you drink of it, put into it halfe a ſpoonfull of the powder of ſloe kernels. Alſo if you take the oyle of A powder for the ſtone in the bladder.

Scor-

Scorpion, it is very good to annoynt the members, and the tender parts of the belly againſt the bladder.

A bathe for the ſtone. To make a bath for the ſtone, take mallows, holihock, and lilly roots, & Linſeed, Pellitory of the wall, and ſeeth them in the broth of a Sheeps head, and bathe the Reines of the back therewith oftentimes, for it will open the ſtraitneſſe of the water conduits, that the ſtone may have iſſue & aſſwage the pain, & bring out the gravell with the Urine: but yet in more effect, when a playſter is made and laid upon the reins and belly immediately after the bathing.

A water for the ſtone. To make a water for the ſtone, take a gallon of new milk of a Red Cow, and put therein a handfull of Pellitory of the wall and a handfull of wild time, and a handfull of *Saxifrage*, & a handfull of *Parſly*, and two or three Radiſh roots ſliced, and a quantity of *Philipendula* roots; let them lye in the milk a night, & in the morning putt the milke with the herbes into a ſtill, & diſtil them with a moderate fire of Charcole or ſuch like: then when you are to uſe the water, take a draught of Rheniſh wine or white Wine, and put into it five ſpoonfulls of the diſtilled water, and a little Suger and Nutmeg ſliced, and then drinke of it, the next day meddle not with it, but the third day doe as you did the firſt day, and ſo every other day for a weekes ſpace.

Difficulty of Urine. For the difficulty of Urine, or hardneſſe to make water, take Smallage, Dill, Anniſeeds, & Burnet, of each alike quantity, & dry them & beat them to fine powder & drink half a ſpoonfull thereof, with a good draught of White wine

For hot Urine. If the Urine be hot & burning, the party ſhall riſe every morning to goe to drinke a good draught of new Milke and Suger mixt together, and by all means to abſtain from Beer that is old hard and tart, and from all meats and ſawces which are ſowr and ſharp.

For the Strangullion. For the Strangullion, take *Saxifrage*, *Polypody* of the Oak; the root of beans, and a quantity of Raiſins, of every one three handfull or more, & then two gallons of good Wine, or elſe Wine lees, and put it into a Serpentary, & make thereof a good quantity, & give the ſicke to Drinke Morning and Evening a ſpoonefull at once.

For

For them that cannot hold their water in the night time, take Kids hoof, and dry it, and beat it into powder, and give it to the patient to drink, either in beer or Ale four or five times over. For piſſing in bed.

For the rupture or burſenneſſe in men; take Comfrey and *Fermoſmund*, and beat them together, and yellow wax, and Dears ſuet, untill it come unto a ſalve, and then apply it unto the broken place, and it will knit it; alſo it ſhall be good for the party to take Comphry roots, and roſt them in hot embers, as you roſt wardens, and let the party eat them: for they are very ſoveraign for the rupture; eſpecially being eaten in a morning faſting; and by all means let him wear a ſtrong truſſe till it be whole. For the rupture.

Take Goats clawes and burn them in a new earthen pot to powder, then put of the powder into broth or pottage, and eat it therein: or otherwiſe take Rue, Parſley, and Gromwell, and ſtamp them together, and mixe it with wine and drink it. Additions to the diſeaſes of the reins and bladder.

Take *Agnus caſtus*, and *Caſtoreum*, and ſeeth them together in wine, and drink thereof; alſo ſeeth them in vinegar, and lap it hot about the privy parts, and it will help. For him that cannot hold his water.

Take Malmſey and butter, and warm it, and waſh the reins of the back, whereupon you find pain, then take oyl of Mace, and anoint the back therewith. For the Gonorea, or ſhedding of ſeed.

Firſt waſh the reins of the back with warm white wine, then annoint all the back with the ointment called Perfumato. For weakneſs in the back.

Take a leg of beef, a handful of Fennel roots, a handful of Parſly roots, two roots of Comphry, one pound of Raiſins of the Sun, a pound of damask Prune, and a quarter of a pound of Dates, put all theſe together, and boyl them very ſoft, with ſix leaves of Neep, ſix leaves of Clary, twelve leaves of Bittany of the wood, and a little Harts tongue: when they are ſod very ſoft, take them into the ſame broth again, with a quart of ſack, and a penniworth of large mace, and of this drink at your pleaſure. For heat in the reins. For comforting and ſtrengthning of the back.

For the Hemeroides, which is a troubleſome and ſore griefe, take of Dill, Dog-fennel, and Pellitory of Spain, of each halfe a handfull, and beat it in a morter with Sheeps ſuet and black Sope, till it come to a ſalve, and then plaiſter-wiſe, apply it to the For the Hemeroids.

the ſore, and it will give the grief eaſe.

For the piles or hemeroids.

For the Piles or Hemerroides, take half a pint of ale, and a good quantity of Pepper, and as much Allom as a Walnut; boyl all this together till it be as thick as birdlime, or thicker; this done, take the juyce of white Violets, and the juyce of Houſleek, and when it is almoſt cold, put in the juyce, and ſtrain them altogether, and with this ointment annoint the ſore place twice a day. Otherwiſe for this grief, take Lead and grate it ſmall, and lay it upon the ſore: or elſe take muſcles dryed and beat to powder, and lay it on the ſores.

For the falling of the fundament.

If a mans fundament fall down through ſome cold taken, or other cauſe, let it be forthwith put up again: then take the powder of *Town croſſe* dried, and ſtrew it gently upon the fundament, and anoint the reins of the back with honey, and then about it ſtrew the powder of Cummin and Calaſine mixt together, and eaſe will come thereby.

Additions to the diſeaſes of the privy parts.

For the hemeroids.

Take a great handfull of Orpins, and bruiſe them between your hands, till it be like a ſalve, and then lay them upon a cloath, and bind them faſt to the Fundament.

For the green ſickneſſe.

To help the green ſickneſſe, take a pottle of white wine, and a handfull of Roſemary, a handfull of Wormwood, an ounce of Cardus Benedictus ſeed, and a dram of Cloves; all theſe muſt be put into the white wine in a jug, and covered very cloſe, and let it ſteep a day and a night before the party drink of it, then let her drink of it every morning, and two hours before ſupper: and ſo take it for a fortnight, and let her ſtir as much as ſhe can, the more the better, and as early as ſhe can. Otherwiſe for this ſickneſſe take Hyſop, Fennel, Penyroyal, of theſe three, one good handful, take two ounces of Currants, ſeeth theſe in a pint of fair water, to a half, then ſtrain the herbs from the liquor, and put thereto two ounces of fine ſugar, and two ſpoonfuls of white wine vinegar, let the party drink every morning four ſpoonfuls thereof, and walk upon it.

To encreaſe womans milk.

To increaſe womans milk, you ſhall boyl in ſtrong poſſet ale, good ſtore of Coleworts, and cauſe her to drink every meal of the ſame: alſo, if ſhe uſe to eat boiled Coleworts with her meat, it will wonderfully increaſe her milk.

To dry up womans milk, take red ſage, and having ſtampt it

it, and ſtrained the juyce from the ſame, adde thereunto as much wine vinegar, and ſtir them well together, then warm it on a flat diſh, over a few coals, ſteep therein a ſheet of brown paper, then making a hole in the midſt thereof for the nipple of the breſt to go through, cover all the breaſt over with the paper, and remove it as occaſion ſhall ſerve, but be very careful it be laid very hot to. Some are of opinion, that for a woman to milk her breaſts upon the earth, will cauſe her to dry: but I refer it to triall. To dry up milk.

To help womens ſore breaſts, when they are ſwelled, or elſe inflamed, take Violet leaves, and cut them ſmall, and ſeeth them in milk or running water with wheat bran, or wheat bread crummes, then lay it to the ſore, as hot as the party can endure it. A pultis for ſore breaſts in women.

If a woman have a ſtrong and hard labour, take four ſpoonfulls of another womans milk, and give it the woman to drink in her labour, and ſhe ſhall be delivered preſently. For eaſe in child bearing.

If a woman by miſchance have her child dead within her, ſhe ſhall take *Dittander*, *Felwort*, *Penyroyall*, and ſtamp them, and take of each a ſpoonfull of the juyce, and mix it with old wine, and give her to drink, and ſhe ſhall ſoon be delivered without danger. Child dead in the womb.

To make a woman to conceive, let her either drink *Mugwort* ſteeped in wine; or elſe the powder thereof mixed with wine, as ſhall beſt pleaſe her taſte. Aptneſſe to conceive.

Take the powder of *Corall* finely ground, and eat it in a rear egg, and it will ſtay the flux. Additions to womens infirmities.

Againſt womens terms, make a peſſary of the juice of *Mugwort*, or the water that it is ſodden in, and apply it, but if it be for the flux of the flowres, take the juice of *Plantain*, and drink it in red wine. To ceaſe womens flowers.

Take a Fomentation made of the water wherein the leaves and flowers of *Tutſon* is ſodden, to drink up the ſuperfluities of the matrix, it cleanſeth the entrance; but this herb would be gathered in harveſt; if the woman have pain in the matrix, ſet on the fire, water that *Amomum* hath been ſodden in, and of the decoction make a peſſary, and it will give eaſe. Againſt the flowers. For the matrix.

Take

A generall purge for a woman in child bed.

Take two or three eggs, and they muſt be neither roſt nor raw, but between both, and then take butter that Salt never came in, and put into the eggs, and ſup them off; and eat a piece of brown bread to them, and drink a draught of ſmall Ale.

To deliver the dead birth

Take the root of *Ariſtolochia rotunda*, and boyl it in wine and oil, make a fomentation thereof, and it helps.

To increaſe milk.

Take the buds and tender crops of Briony, and boyl them in broath or pottage, and let the woman eat thereof, it is ſoveraign.

For a woman that is new brought in bed, and ſwooneth much.

Take Mugwort, Motherwort, and Mints, the quantity of a handfull in all, ſeeth them together in a pint of Malmſey, and give her to drink thereof two or three ſpoonfuls at a time, and it will appeaſe her ſwooning.

To provoke ſleep.

Take Henbane ſtamped and mixt with vinegar, and apply it playſter wiſe over all the forehead, and it will cauſe ſleep.

For ſore breſts

Take Sage, Smallage, Mallowes, and Plantain, of each an handfull, beat them all well in a mortar, then put unto them oatmeal and milk, and ſpread it on a fine linnen cloath, an inch thick, and lay it to the breſt or breaſts: or otherwiſe, take white bread leaven, and ſtrain it with cream, and put thereto two or three yolks of eggs, ſallet oyl, or oyl of Roſes, and put it upon a ſoft fire till it be warme, and ſo apply it to the breaſt.

For morphew of both kinds.

For Morphew, whether it be white or black, take of the Litharge of gold, a dram, of unwrought brimſtone two drams, beat them into fine powder, then take of the oyl of Roſes and Swines greaſe, of each a like quantity, and grind them altogether with halfe a dram of Champhire, and a little vinegar, and anoint the ſame therewith morning and evening.

To breed hair

To breed hair, take Southernwood, and burn it to aſhes, and mixe it with common oyl, then annoint the bald place therewith morning and evening, and it will breed hair exceedingly.

For the gout.

For the Gout, take *Ariſtolochia rotunda Althea* Bettony, and the roots of wild Neep, and the roots of the wild Dock cut in pieces after the upper rind is taken away, of each alike quantity, boyl them all in running water till they be ſoft and thick: then ſtamp them in a morter, as ſmall as may be, and put

put thereto a little quantity of chimney ſoot, and a pint of new milk of a Cow, which is all of one intire colour, and as much of the urine of a man that is faſting, and having ſtirred them all well together, boile them once again on the fire, then as hot as the party can ſuffer it, apply it to the grieved place, and it will give him eaſe.

For the Sciatica, take of muſtard ſeed a good handfull, and as much of white hony, and as much weight of figs, and crummes of white bread half ſo much, then with ſtrong vinegar beat it in a morter till it come unto a ſalve; then apply it unto the grieved place, and it will give the grieved party eaſe: ſo will alſo a plaiſter of Oxicrotium, if it be continually warm upon the ſame. For the Sciatica.

To help all manner of ſwelling or aches in what part of the body ſoever it be, or ſtinging of any venomous beaſt, as Adder, Snake, or ſuch like, take Hore-hound, Smallage, Porrets, ſmall Mallows, and wild Tanſey, of each a like quantity, and bruiſe them, or cut them ſmall: then ſeeth them altogether in a pan, with milk, Oatmeal, and as much ſheeps ſuet, or Deers ſuet, as a Hens egge, and let it boyl till it be a thick plaiſter, then lay it upon a blew woollen cloth, and lay it to the griefe, as hot as one can ſuffer it. For any pain or ſwelling, or ſtinging of venomous Beaſts.

For any ſwelling in the leggs or feet, take a good handful of water Creſſes, and ſhread them ſmall, and put them in an earthen pot: and put thereto thick Wine lees, and wheat bran, and Sheeps ſuet, of each of them a like quantity, and let them boyl together untill they be thick; then take a linnen cloth, and bind it about the ſore and ſwelling, as hot as the party grieved can indure it, and let it remain on a whole night and a day without any removing, and when you take it away, lay to it a freſh plaiſter hot, as before, & it will take away both the pain and the ſwelling. Other Chirurgions for this grief, take hony and beer, and beat them together, and therewith bathe the ſwelling morning and evening. For ſwellings in the legs or feet.

To waſh any ſore or Ulcer, take running water, and Bolearmoniack and Camphire, and boile them together, and dip in a cloth; and lay it to the ſore, as hot as may be endured; alſo Plantain water is good to kill the heat of any ſore: or if you take Woodbine leaves, and bruiſe them ſmall, it will heal a ſore; or if you A water to waſh a ſore with.

wash a sore with verjuyce, that hath been burnt or scalded, it is a present remedy.

A pultis for a sore. There be divers others, which for this grieve take the green of Goose dung, and boyl it in fresh butter, then strain it very clean and use it. And Sallet oyl, and Snow water beaten together, will cure any scald or burning.

For any old sore. To cure any old sore how grievous soever it be, take of new milk three quarts, and a good handful of Plantain, and let it boyl till a pint be consumed; then add three ounces of Allom made in powder, and an ounce and a half of white Sugar candy powdered. Also then let it boyl a little till it have a curd, then strain it; with this warm, wash the Ulcer, and all the members about it: then dry it, and lay upon the Ulcer *Unguentum Basilicon*, spread on lint, and your *diapalme* playster over it, for this strengthneth and killeth the itch; but if you find this is not sharp enough, then take of milk a quart, Allom in powder two ounces, vinegar a spoonfull; when the milk doth seeth, put in the Allom and Vinegar, then take off the curd, and use the rest as was before said, and it will cure it.

For any scabs or itch. For scabs or itch, take *Unguentum Populion*, and therewith annoint the party, and it will help; but if it be more strong and rank, take an ounce of Nerve oyl and three penny worth of quick-silver, and beat and work them together, until you see that assuredly the quick silver is killed; then let the party anoint therewith the palms of his hands, the boughs at his elbowes, his arm-pits, and hams, and it will cure all his body.

For the leprosie. To cure the leprosie take the juyce of Colworts, and temper it with Allom and strong Ale, and annoint the Leper therewith morning and evening, and it will cleanse him wonderfully, especially if he be purged first, and have some part of his corrupt blood taken away.

To take away pimples. To take away either pimples from the face, or any other part of the body, take virgin wax, and *Spermaceti*, of each alike quantity, and boyl them together, and dip in a fine linnen cloth, and as it cools, dip it well of both sides, then lay upon it another fair cloath upon a table, and then fold up a cloath in your hands, and all to slight it with the cloath, then take as much as will cover the grieved place.

If any man have his privy parts burnt, take the the aſhes of a fine linnen cloth in good quantity, and put it into the former oyl of eggs, and anoint the ſore member therewith, and it will cure it. Privy parts burnt.

For any burning, take ſix new laid eggs and roaſt them very hard, and take out the yolks thereof and put them into an earthen pot, and ſet it over the fire on hot embers, and then whilſt the eggs look black, ſtir them with a ſlice untill they come to an oyl, which oyl take, clarifie, and put it into a glaſſe by it ſelfe, and therewith anoint the burning and it will cure it For any burning.

For any ſcalding with hot water, oyl, or otherwiſe, take good cream, and ſet it on the fire, and put into it the green which growes on a ſtone wall; take alſo Yarrow, the green of Elder bark and fire graſſe, and chop them ſmall, then put them into the cream, and ſtir it well till it come to an oyl ſalve, then ſtrain it, and anoint the ſore with it. For any ſcalding.

To dry up any ſore, take Smallage, Groundſil, wild Mallowes, and Violet leaves; chop them ſmall, and boyl them in milk with bruiſed Oatmeal and Sheeps ſuet, and ſo apply it to the ſore. A pultis to dry a ſore.

To eat away dead fleſh, take Stubblewort, and fold it up in a red dock leaf, or red wort leafe, and ſo roſt it in the hot embers, and ſo lay it to the ſore, and it will fret away all the dead fleſh; or otherwiſe, if you ſtrew upon the ſore a little Precipitate, it will eat away dead fleſh. To eat away dead fleſh.

To make a water to heal all manner of wounds, you ſhall take Iuph worts flowers, leaves and roots, and in *March* or *Aprill*, when the flowers are at the beſt, diſtil it; then with that water, bathe the wound, and lay a linnen cloath well therewith in the wound, and it will heal it. A water to heal wounds.

To heal any wound or cut in any fleſh or part of the body, Firſt, if it be fit to be ſtitch'd, ſtitch it up, and then take *Unguentum aurum*, and lay it upon a pleagant of lint as big as the wound, and then over it a *diminium* plaiſter made of Sallet oyl and red lead, and ſo dreſſe it at leaſt once in four and twenty hours: but if it be a hollow wound, as ſome thruſt in the body, or other members, then you ſhal take *Balſamum cephalicum* and warming it on a chafing diſh of coals, dip the tent therein, To heal any wound.

and ſo put it into, the wound, then lay your plaiſter of Diminium over it, and do thus at leaſt once a day until it be whole.

For ſinews cut or ſh unk.

If a mans ſinews be cut or ſhrunk, he ſhall go to the root of the wild Neep, which is like woodbine, and make a hole in the midſt of the root, then cover it well again that no air go out nor in, nor other moyſture; th is let it abide a day and a night, then go and open it, and you ſhall find therein a certain liquor, then take out the liquor and put it into a clean glaſſe, and do thus every day whilſt you find any moiſture in the hole; and this muſt onely be done in the months of *April* and *May*: then annoint the ſore therewith againſt the fire, then wet a linnen cloath in the ſame liquor, and lap it about the ſore, and the vertue will ſoon be perceived.

To break any impoſtume.

To break any Impoſtume, and to ripen it, only take the green Melilot plaiſter, and lay it thereunto; and it is ſufficient.

To generall infirmities of Surgery, and firſt of burnings and ſcaldings.

Take Plantain water, or Sallet oyl, and running water beaten together, and therewith anoint the ſore with a feather, till the fire be taken out, then take the white of eggs, and beat them to oyl; which done, take a hare skinne and clip the hair into the oyl, and make it as thick as you may ſpread it upon a fine linnen cloath, and ſo lay it upon the ſore, and remove it not, until it be whole, and if any riſe up of it ſelfe, clip it away with your ſhears, and if it be not perfectly whole, then take a little of the oyntment, and lay it unto the ſame place again: otherwiſe take half a buſhel of Glovers ſhreads of all ſorts, and ſo much of running water, as ſhall be thought convenient to ſeeth them, and put thereto a quarter of a pound of Burrowes greaſe, and then take halfe a buſhel of the down of Cats tails; and boyl them altogether, continually ſtirring them, untill they be ſodden, that they may be ſtrained into an earthen pot or glaſſe, and with it anoint the ſore.

For burnings or ſcaldings on the face.

Or elſe take Caprifolium, Mouſe-ear, ground Ivy, and Hens dung, the reddeſt or the yelloweſt, and fry them with May butter altogether, untill it be brown, then ſtrain it through a clean cloath, and anoint the ſore therewith.

For burning or ſcalding, with either Liquor or Gunpowder.

Take the middle rind of the Elm tree, and lay it two or three hour

hours in fair running water, till it wax ropy like glew, and then anoint the ſore therewith: Or otherwiſe, take ſheeps tallow, and ſheeps dung, and mixe them together till they come to a ſalve, and then apply it to the ſore.

An ointment for burning.

Take Plantain leaves, Daiſie leaves, the green bark of Elders, and green Germanders, ſtamp them altogether with freſh butter, or with oyl, and ſtrain it through a linnen cloath, and with a feather anoint the ſore till it be whole.

Take of the oyl Olive a pint, Turpentine a pound unwrought, Wax half a pound, Roſen a quarter of a pound, Sheeps ſuet two pound; then take of Orpents, Smallage, Ragwort, Plantain, and Sicklewort, of each a good handful, chop all theſe herbs very ſmall, and boyl them in a pan altogether upon a ſoaking fire, and ſtir them exceeding much, until they be well incorporated together; then take it from the fire, and ſtrain all through a ſtrong canvaſſe cloath into clean pots, or glaſſes, and uſe it as your occaſion ſhall ſerve, either to anoint, teint, or plaiſter.

Ulcers and ſores.

A ſalve for any old ſore.

Or otherwiſe, take Popler buds, and Elder buds, ſtamp and ſtrain them, then put thereto a little Venice Turpentine, Waxe, and Roſin, and ſo boyl them together, and therewith dreſſe the ſore. Or elſe take two handfuls of Plantain leaves, bray them ſmall, and ſtrain out the juyce, then put to it as much womans milk, a ſpoonful of Hony, a yolke of an Egg, and as much wheat flower as you think will bring it to a ſalve: then make a plaiſter thereof, and lay it unto the ſore, renewing it once in four and twenty hours.

To take away dead fleſh.

Take an ounce of *Unguentum Apoſtolorum*, and an ounce of *Unguentum Ægyptiacum*, and put them together in a pot, being firſt well wrought together in a bladder; and if the fleſh be weak, put into it a little fine white Sugar, and therewith dreſſe the ſore; or otherwiſe, take only Precipitate in fine powder, and ſtrew it on the ſore.

A water for a ſore.

Take a gallon of Smiths ſleak water, two handfuls of Sage, a pint of Hony, a quart of Ale; two ounces of Allome, and a little white Copperas: ſeeth them altogether till half be conſumed, then ſtrain it, and put it into a clean veſſel, and therewith waſh the

ſore. Or otherwiſe, take clean running water, and put therein Roch Allom, and Madder, and let them boyl till the Allom and the Madder be conſumed, then take the clearer of the water, and therewithall waſh the ſore.

Or elſe take Sage, Fennel, Cinquefoil, of each a good handful, boyl them in a gallon of running water till they be tender, then ſtrain the liquor from the herbs and put it to a quarter of a pound of Roch Allom, and let it ſeeth again a little, till the Allom be melted, then take it from the fire, and uſe it thus: dip lint in it warm, and lay it to the ſore; and if it be hollow, apply more lint, then take a little bolſter of linnen cloath, and wet it well in the water, then wring out the water, and ſo bind on the bolſter cloſe.

A black plaiſter to heal old ſores, and kill inflammations

Take a pint of ſallet oyl, and put into it ſix ounces of red lead, and a little ceruſſe or white lead, then ſet it over a gentle fire, and let it boyl a long ſeaſon, ſtirring it well till it be ſtiffe, which you ſhall try in this order; let it drop from your ſtick or ſlice, upon the bottom of a ſaucer, and ſo ſtand untill it be cold, and then if it be well boiled, it will be ſtiffe and very black, then take it off and let it ſtand a little, and after ſtrain it through a cloath into a baſon, but firſt annoint the baſon with ſallet oyl, and alſo your fingers, and ſo make it up into rouls plaiſterwiſe, and ſpread it, and apply it as occaſion ſhall ſerve.

An oyntment to ripen ſores.

Take Mallows and Beets, and ſeeth them in water, then dry away the water from them, and beat the herbs well with old Boares greaſe, and ſo apply it unto the apoſtume, hot.

For the ſtinging by any venomous thing

Take a handful of Rue, and ſtamp it with ruſty bacon till it come to a perfect ſalve, and therewith dreſſe the ſore till it be whole.

For a venom.

If the party be outwardly venomed, take Sage, and bruiſe it wel, and apply it unto the ſore, renewing it at leaſt twice a day; but if he be inwardly, then let the party drink the juyce of Sage, either in Wine or Ale morning and evening.

For a ringworm.

Take Cellandine early in the morning, and bruiſe it well, and then apply it to the ſore, and renew it twice or thrice a day.

Take of Camphier one dram, of Quickſilver four pennyworth, killed

killed well with Vinegar, then mix it with two penny worth of Oyl *de bay*, and therewith annoint the body. Or otherwiſe, take red Onions, and ſeeth them in running water a good while; then bruiſe the Onions ſmall, and with the water they were ſodden in, ſtrain them in, and then waſh the infected place with the ſame. For the Itch.

Take a great quantity of the herb Bennet, and as much of red Nettles, pound them well, and ſtrain them, and with the juice waſh the Patient naked before the fire, and ſo let it drink in, and waſh him again, and do ſo divers dayes till he be whole. For the dried ſcab.

Take a penniworth of white Copperas, and as much green Copperas, a quarter of an ounce of white Mercury, a half penniworth of Allom, and burn it, and ſet all over the fire, with a pint of fair water, and a quarter of a pint of wine Vinegar, boyl all theſe together till they come to half a pint, and then anoint the ſore therewith. To kill the Itch.

Take Barrowes greaſe a pretty quantity, and take an apple and pare it, and take the coar clean out, then chop your apple and your Barrowes greaſe together, and ſet it over the fire that it may melt, but not boyl; then take it from the fire, and put thereto a pretty quantity of roſe water, and ſtir all together till it be cold, and keep it in a clean veſſel, and then anoint the face wherewith. To take away the ſcars of the ſmal pox.

Take Quick ſilver, and kill it with faſting ſpittle; then take Verdigreaſe, Arabick, Turpentine, Oyl Olive, and Populion, and mix them together to one intire oyntment, and anoint the ſores therewith, and keep the party exceeding warm. Or otherwiſe, take of Allom burned, of Roſin, Frankincenſe, Populion, Oyl of Roſes, Oyl *de bay*, Oyl Olive green Copperas, Verdigreaſe, White Lead, Mercury ſublimate, of each a pretty quantity, but of Allom moſt; then beat to powder the ſimples that are hard, and melt your oyls, and caſt in your powder, and ſtir all well together; then ſtrain them through a cloath, and apply it warm to the ſores; or elſe, take of Capons greaſe that hath toucht no water, the juyce of Rue, and the fine powder of Pepper, and mix them together to an oyntment, and apply it round about the ſores, but let it not come into the ſores; and it will dry them up. For the french or ſpaniſh Pox

To put out the French or Spaniſh pox.

Take of Treacle half a penny worth, of long Pepper as much, and of Grains as much, a little Ginger, and a little quantity of Licoras, warm them with ſtrong Ale, and let the party drink it off, and lie down in his bed, and take a good ſweat; and then when the ſores ariſe, uſe ſome of the ointment before rehearſed.

To make the ſcabs of the French pox to fall away.

Take the juyce of red Fennel, and the juyce of Seagreen, and Stone-honey, and mixe them very well together till it be thick, and with it anoint the party; but before you do annoint him, you ſhall make this water. Take Sage, and ſeeth it in very fair water, from a gallon to a pottle, and put therein a quantity of hony, and ſome allom, and let them boyl a little together; when you have ſtrained the herbs from the water; then put in your hony and your allom, and therewith waſh the pox firſt, and let it dry in well, and then lay on the aforeſaid ointment.

Additions to green wounds

A defenſitive for a green wound.

Take the oyle of the white of an egg, wheat flower, a little hony, and Venice Turpentine, take and ſtirre all theſe together, and ſo uſe it about the wound, but not within; and if the wound do bleed, then add to this ſalve, a little quantity of Bolearmoniack.

A ſalve for a green wound.

Take *Opoponax* and *Galbanum*, of each an ounce, *Amonianum*, and Bedlind, of each two ounces, of Lethargy of gold one pound and an half, new wax half a pound, *Lapis Calaminaris*, one ounce, Turpentine four ounces, Myrrhe two ounces, oyl *de bay* one ounce Thuſs one ounce, *Ariſtolochia* roots, two ounces, oyl of Roſes two ounces, ſallet oyl two pound. All the hard Simples muſt be beaten to fine powder, and ſearſed; take alſo three pints of right Wine vinegar, and put your four gums into the vinegar, a whole day before, till the gums be diſſolved, then ſet it over the fire, and let it boyl very ſoftly, untill your vinegar be as good as boiled away; then take an earthen pot with a wide mouth, and put your oyl in, and your wax, but your wax muſt be ſcraped before you put it in; then by a little at once put in your Lethargy, and ſtir it exceedingly, then put in all your gums, and all the reſt but let your Turpentine be laſt, and ſo let it boyl till you ſee it grow to be thick; then pour it into a baſon of water, and work it with oyl of Roſes for ſticking unto your hands, and make it up in rouls plaiſter-wiſe, and here is to be noted, that your oyl of Roſes muſt not

not be boyled with the reſt, but after it is taken from the fire, a little before the Turpentine.

A water to heal any green wound, ſore, or ſore.

Take three good handfuls of Sage, and as much of Honiſuckle leaves, and the flowers clean picked; then take one pound of Roch Allom, and a quarter of a pound of right Engliſh honey clarified, half a penniworth of grains, and two gallons of running water; then put all the ſaid things into the water, and let them ſeeth till halfe be conſumed; then take it from the fire till it be almoſt cold, and ſtrain it through a clean cloath, and put it up in a glaſſe; and then either on teint or pleagant, uſe it as you have occaſion.

To ſtaunch blood, and draw ſinews together.

Take a quart of Rie flower, and temper it with running water, and make dough thereof, then according to the bigneſſe of the wound, lay it within the defenſitive plaiſter before rehearſed, over it, and every dreſſing make it leſſe and leſſe till the wound be cloſed.

A made oyl for ſhrinking ſinews.

Take a quart of Neats foot oyl, a quart of Oxe gals, a quart of Aquavitæ, a quart of Roſe water, a handful of Roſemary ſtript, and boyl all theſe together till half be conſumed, then preſſe and ſtrain it, and uſe it according as you find occaſion.

For a wound in the guts.

Take Hony, Pitch, and Butter, and ſeeth them together, and anoint the hurt againſt the fire, and tent the ſore with the ſame.

For pricking with a thorn.

Take groundſil and ſtamp it, and ſeeth it with ſweet milk till it be thick, then temper it with black ſope, and lay it to the ſore.

To gather fleſh in wounds.

Take Roſin, a quarter of a pound, of wax three ounces, of oyle of Roſes one ounce and a half, ſeeth them all together in a pint of white wine till it come to skimming; then take it from the fire, and put thereto two ounces of Venice Turpentine, and apply it to the wound or ſore.

Additions for ache or ſwellings.

Take Muſtard made with ſtrong Vinegar, the crums of brown bread, with a quantity of hony, and ſix figs mixt, temper all together wel, and lay it upon a cloath plaiſter-wiſe; put a thin cloath between the plaiſter and the fleſh, and lay it to the place grieved, as oft as need requires.

A yellow ſear-cloth for any pain or ſwelling.

Take a pound of fine Roſin, of oyle *de bay* two ounces, of *Populeon* as much, of Frankincenſe half a pound, of Oyle of Spike

two

two ounces, of oyl of Camomile two ounces of oyle of Roſes two ounces, of Wax halfa pound, of Turpentine a quarter of a pound, melt them and ſtir them well together, and then dip linnen cloaths therein, and apply the Sear-cloath as you ſhall have occaſion: and note, the more oyle you uſe, the more ſupple the Sear-cloath is, and the leſſe oyle, the ſtiffer it will be.

For bruiſes ſwelled. Take a little black ſope, ſalt and hony, and beat them well together, and ſpread it upon a brown paper, and apply it to the bruiſe.

For ſwelled legs. Take Mallowes and ſeeth them in the dregs of good Ale or Milk, and make a plaiſter thereof, and apply it to the place ſwelled.

For any ache. Take in the month of *May*, Henbane, and bruiſe it well, and put it into an earthen pot, and put thereto a pint of Sallet oyl, and ſet it in the Sun till it be all one ſubſtance, then anoint the ache therewith.

℣ A plaiſter for any pain in the joints. Take halfa ponnd of unwrought waxe, as much Roſin, one ounce of *Galbanum*, a quarter of a pound of Lethargy of gold, three quarters of white lead, beaten to powder and ſearſt; then take a pint of Neats foot oyl, and ſet it on the fire in a ſmall veſſel which may contain the reſt, and when it is all moulten, then put in the powders, and ſtir it faſt with a ſlice, and try it upon the bottom of a ſaucer, when it beginneth to be ſomewhat hard; then take it from the fire, and annoint a fair board with Neats-foot oyle, and as you may handle it for heat, work it up in rouls, and it will keep five or ſix years, being wrapped up cloſe in paper, and when you will uſe it, ſpread of it thin upon new Lockram or Leather, ſomewhat bigger then the grieſe, and ſo if the grieſe remove, follow it, renewing it morning and evening, and let it be ſomewhat warm when it is laid on, and beware of taking cold, and drinking hot wines.

For bones out of joint, or ſinews ſprung or ſprained. Take four or five yolks of eggs hard ſodden or roaſted, and take the branches of great Morrell, and the berries in Summer, and in the winter the roots, and bray all well together in a morter with ſheeps milk, and then frie it untill it be very thick, and ſo make a playſter thereof, and lay it about the ſore

ſore, and it wil take away both pain and ſwelling.

A bathe for broken joynts.

Take a gallon of ſtanding Lye, put to it of Plantain and Knot graſſe, of each two handful, of Wormwood and Comfrey, of each a handful, and boyle all theſe together in the lye a good while, and when it is luke warm, bath the broken member therewith, and take the buds of the Elder gathered in *March*, and ſtrip it downward, and a little boyl them in water, then eat them in Oyl, and a very little wine vinegar, a good quantity at a time, in the morning, ever before meat, or an hour before the Patient go to dinner, and it much avails to the knitting of bones.

A generall bath for cleaſing the skin, and comforting the body.

Take Roſemary, Fetherfew, Organe, Pellitory of the wall, Fennel, Mallowes, Violet leaves, and Nettles, boyl all theſe together, and when it is well ſodden, put to it two or three gallons of milk, then let the party ſtand or ſit in it an hour or two, the bath reaching up to the ſtomack, and when they come out, they muſt go to bed and ſweat, and beware taking of cold.

A ſoveraign help for broken bones.

Make a playſter of wheat flower, and the whites of egges, and ſpread it on a double linnen cloath, and lay the playſter on an even board, and lay the broken limb thereon, and ſet it even according to nature, and lay the playſter about it and ſplint it, and give him to drink, Knitwort, the juyce thereof, twice and no more, for the third time it will unknit, but give him to drink nine dayes, each day the juyce of Comfrey, Daiſies, and Oſmund, in ſtale Ale, and it ſhall knit, and let the foreſaid playſter lye to, ten dayes at the leaſt: and when you take it away do this, take Horehound, red Fennell, Hounds tongue Walwort, and Pellitory, and ſeeth them; then unrole the member, and take away the ſplints; and then bath the linnen and the playſter about the member in this bathe, till it have ſoakt ſo long, that it come gently away of it ſelfe, then take the aforeſaid playſter, and lay thereto five or ſix dayes very hot, and let each playſter lye a day and a night, and alwayes ſplint it well, and after cheriſh it with the oyntments before rehearſed for broken bones, and keep the party from unwholeſome meats and drinks till he be whole: and if the hurt be on his arme, let him bear a ball of green herbs in

in his hand to prevent the ſhrinking of the hand, and ſinewes.

For any fever. Take Sage, Ragwort, Yarrow, unſet Leeks, of each a like quantity, ſtamp them with Bay ſalt, and apply them to the wriſts of the hands.

To expel heat in a fever. Blanch Almonds in the cold water, and make milk of them (but it muſt not ſeeth) then put to it Sugar, and in the extremity of heat, ſee that you drink thereof.

The royal medicine for fevers. Take three ſpoonfuls of Ale, and a little Saffron, and bruiſe and ſtrain it thereto, then add a quarter of a ſpoonful of fine Treacle, and mix altogether, and drink it when the fit comes.

Another. Take two roots of Crowfoot that growes in a marſh ground, which have no little roots about them, to the number of twenty or more, and a little of the earth, that is about them, and do not waſh them, and add a little quantity of Salt, and mix it well together, and lay it on linnen cloaths, and bind it about your thumbs, betwixt the firſt and the neather joint, and let it lie nine dayes unremoved, and it will expel the Fever.

An approved Medicine for the greateſt Lask or Flixe.

Take a right Pomwater, the greateſt you can get, or elſe two little ones, roaſt them very tender to pap, then take away the skinne and the core, and uſe only the pap, and the like quantity of Chalk finely ſcraped, mix them both together upon a trencher before the fire, and work them well to a plaiſter; then ſpread it upon a linnen cloath warmed very hot as may be ſuffered, and ſo bind it unto the navil for twenty four hours, uſe this medicine twice or thrice, or more, untill the Lask be ſtaied.

Of Oyle of Swallowes.

To make the Oyle of Swallowes, take Lavender-cotten, Spike, Knot-graſſe, Ribwort, Balm, Valerian, Roſemary tops, Woodbine tops, Vine ſtrings, French mallowes, the tops of Alecoſt, Straw

Strawberry ſtrings, Tutſan, Plantain Walnut tree leaves, the tops of young Beets, Iſop, Violet leaves, Sage of vertue, fine Roman Wormwood, of each of them a handful, Camomile, and red Roſes, of each two handful, twenty quick Swallowes, and beat them altogether in a morter, and put to them a quart of Neats foot oyl, or May butter, and grind them all well together with two ounces of Cloves well beaten; then put them altogether in an earthen pot, and ſtop it very cloſe, that no air come into it, and ſet it nine dayes in a cellar, or cold place, then open your pot, and put into it half a pound of white or yellow wax, cut very ſmall, and a pint of oyl or butter; then ſet your pot cloſe ſtopped into a pan of water, and let it boyl ſix or eight hours, and then ſtrain it: this oyl is exceeding ſoveraign for any broken bones, bones out of joint, or any pain or grief either in the bones or ſinewes.

To make oyle of Camomile, take a quart of ſallet Oyle and put it into a glaſſe, then take a handful of Camomile, and bruiſe it, and put into the oyl, and let them ſtand in the ſame, twelve dayes; only thou muſt ſhift it every three dayes, that is, to ſtrain it from the old Camomile, and put in as much of new, and that oil is very ſoveraign for any grief, proceeding from old cauſes. To make oyle of Camomile.

To make oyle of Lavender, take a pint of ſallet Oyle, and put it into a glaſſe, then put to it a handful of Lavender, and let it ſtand in the ſame twelve dayes, and uſe it in all reſpects, as you did your oyle of Camomile. To make oile of Lavender.

To make an Oyle which ſhall make the skin of the hands very ſmooth, take Almonds, and beat them to oyle, then take whole Cloves, and put them both together into a glaſſe, and ſet it in the ſun five or ſix dayes, then ſtrain it, and with the ſame anoint your hands every night when you go to bed, or otherwiſe as you have convenient leiſure. To make ſmooth hands

To make that ſoveraign water, which was firſt invented by Dr *Stephens*, in the ſame form as he delivered the Receit to the Arch-biſhop of *Canterbury*, a little before the death of the ſaid Doctor. Take a gallon of good Gaſcoyn wine, then take Ginger, Galingale, Cinamon, Nutmegs, Graines, Cloves bruiſed, Fennel-ſeeds, Carraway-ſeeds, Origanum, To make Dr *Stevens* water.

of.

of every of them a like quantity, that is to ſay, a dram, then take ſage, wild marjoram, peny royall, mint, red roſes, time, pellitory, roſemary, wild time, camomile, lavender, of each of them a handful; then bray the ſpices ſmall, and bruiſe the herbs, and put all into the wine, and let it ſtand ſo twelve hours, only ſtirre it divers times; then diſtill it by a Lymbeck, and keep the firſt water by it ſelfe, for that is the beſt: then keep the ſecond water, for that is good, and for the laſt, neglect it not, for it is very wholeſome, though the worſt of the three. Now for the vertue of this water, it is this: it comforteth the ſpirits and vitall parts, and helpeth all inward diſeaſes that commeth of cold; it is good againſt the ſhaking of the palſie, and cureth the contraction of the ſinews, and helpeth the conception of women that be barren, it killeth the wormes in the body, it cureth the cold cough, it helpeth the tooth-ach, it comforteth the ſtomack, and cureth the old dropſie, it helpeth the ſtone in the bladder, and in the reins, it helpeth a ſtinking breath: and whoſoever uſeth this water moderately, and not too often, it preſerveth him in good liking, and will make him ſeem young in old age. With this water Doctor *Stevens* preſerved his own life, untill ſuch extream age, that he could neither go nor ride, and he continued his life, being bed-rid five years, when other Phyſitians did judge he could not live one year, when he did confeſſe a little before his death, ſaying, That if he were ſick at any time, he never uſed any thing but this water only: and alſo the Arch-biſhop of *Canterbury* uſed it, and found ſuch goodneſſe in it, that he lived till he was not able to drink out of a cup, but ſucked his drink through a hollow pipe of ſilver.

This water will be much the better if it be ſet in the Sun.

A reſtorative of Roſaſolis.

To make a cordial Roſaſolis, take Roſaſolis, and in any wiſe, touch not the leaves thereof in the gathering, nor waſh it; take thereof four good handfuls, then take two good pints of Aquavitæ, and put them both in a glaſſe, or pewter pot of three or four pints, and then ſtop the ſame hard and juſt, and ſo let it ſtand three dayes and three nights, and the third day

day, ſtrain it through a clean cloath into another glaſſe, or pewter pot, and put thereto halfe a pound of Sugar beaten ſmal; four ounces of fine Lycoras beaten into powder, halfe a pound of ſound Dates, the ſtones being taken out, and cut them and make them clean, and then mince them ſmall, and mixe all theſe together, and ſtop the glaſſe or pot cloſe and juſt, and after diſtil it through a Lymbeck, then drink of it at night to bedward, half a ſpoonful with Ale or Beer, but Ale is the better, as much in the morning faſting, for there is not the weakeſt body in the world that wanteth nature or ſtrength, or that is in a conſumption, but it will reſtore him again, and cauſe him to be ſtrong and luſty, and to have a marvellous hungry ſtomack, provided alwayes that this Roſa-ſolis be gathered (if poſſible) at the full of the Moon, when the Sun ſhineth before noon, and let the roots of them be cut away.

Additions to the Oyls.

To make oyl of Roſes or Violets.

Take the flowers of Roſes or Violets, and break them ſmall, and put them into Sallet Oyle, and let them ſtand in the ſame ten or twelve dayes, and then preſſe it. Or otherwiſe take a quart of Oyle Olive, and put thereto ſix ſpoonfuls of clean water, and ſtirre it well with a ſlice, till it waxe as white as milk; then take two pound of red Roſe leaves, and cut the white of the ends of the leaves away, and put the Roſes into the Oyle, and then put it into a double glaſſe, and ſet it in the Sun all the Summer time, and it is ſoveraigh for any ſcalding or burning with water or oyle.

Or elſe take red Roſes new plucked, a pound or two, and cut the white ends of the leaves away, then take May butter, and melt it over the fire with two pound of Oyle Olive, and when it is clarified, put in your Roſes, and put it all in a veſſel of glaſſe, or of earth, and ſtop it well about, that no air enter in or out, and ſet it in another veſſel with water, and let it boyl half a day or more, and then take it forth and ſtrain or preſſe it through a cloath, and put it into glaſſe bottles: this is good for all manner of unkind ſores.

To make Oyl of Nutmegs.

Take two or three pound of Nutmegs, and cut them ſmall, and bruiſe them well, then put them into a pan, and beat them, and ſtir them about, which done, put them into canvaſs

canvaſſe or ſtrong linnen bag, and cloſe them in a preſſe, and preſs them, and get out all the liquor of them, which will be like *manna*; then ſcrape it from the canvaſſe bag, as much as you can with a knife; then put it into ſome veſſel or glaſſe, and ſtop it well, but ſet it not in the Sun, for it will wax clean of it ſelf, within 10 or 15 dayes, and it is worth thrice ſo much as the Nutmegs themſelves, and the oyl hath very great vertue in comforting ſtomack, and inward parts, and aſſwaging the pain of the Mother, and Sciatica.

To make perfect oyle of Spike.

Take the flowres of Spike, and waſh them only in oyle Olive, and then ſtamp them well, then put them in a canvas bag, and preſſe them in a preſſe as hard as you can, and take that which commeth out, carefully, and put it into a ſtrong veſſel of glaſſe, and ſet it not in the Sun, for it will clear of it ſelfe, and wax fair and bright, and will have a very ſharp odour of the Spike; and thus you may make oyl of other herbs of like nature, as Lavender, Camomile, and ſuch like.

To make oile of Maſtick.

Take an ounce of Maſtick, and an ounce of Olibanum pounded as ſmall as is poſſible, and boyl them in oyl Olive (a quart to a third part;) then preſſe it, and put it into a glaſſe, and after ten or twelve dayes it will be perfect: it is exceeding good for any cold grief.

Thus having in a ſummary manner, paſſed over all the moſt Phyſical and Chyrurgical notes, which burthen the mind of our *Engliſh Houſe-wife*, being as much as is needful, for the preſervation of the health of her family; and having in this Chapter, ſhewed all the inward vertues wherewith ſhe ſhould be adorned: I will now returu unto her more outward and active knowledges, wherein albeit the mind be as much occupied as before, yet is the body a great deal more in uſe; neither can the work be well effected by rule or direction.

THE

The Engliſh Houſe-wifes Skill in Cookery.

CHAP. I.

Of the outward and active Knowledge of the Houſe-wife, and of her Skill in Cookery, as Sallets of all ſorts, with Fleſh, Fiſh, Sauces, Paſtery, Banquetting-ſtuff, and ordring of great Feaſts.

TO ſpeak then of the outward and active Knowledges which belong unto our Engliſh Houſe-wife, I hold the firſt and moſt principall to be, a perfect skill and Knowledge in Cookery, together with all the ſecrets belonging to the ſame, becauſe it is a duty really belonging to women; and ſhe that is utterly ignorant therein, may not by Laws of ſtrict Juſtice, challenge the freedome of Marriage, becauſe indeed ſhe can then but perform half her vow: for ſhe may love and obey, but ſhe cannot cheriſh, ſerve, and keep him with that true duty which is ever expected.

To proceed then to this Knowledge of Cookery, you ſhall underſtand that the firſt ſtep thereunto is, to have knowledge of all ſorts of herbs belonging unto the Kitchin; whether they be for the Pot, for Sallets, for Sauces, for ſervings, or for any other ſeaſoning or adorning; which skill of Knowledge of the herbs, ſhe muſt get by her own true labour and experience and not by my relation, which would be much too tedious; and for the uſe of them, She ſhall ſee it in the compoſition of diſhes and meat hereafter following. She ſhall alſo know the time of the year, month, and Moon, in which all Herbs are to be ſown; and when they are in their beſt flou-

She muſt know all herbs

riſhing, that gathering all herbs in their height of goodneſſe, ſhe may have the prime uſe of the ſame. And becauſe I will inable and not burden her memory, I will here give her a ſhort Epitomy of all that Knowledge.

Her skill in the Garden.

Firſt then, let our Engliſh Houſ wife know, that ſhe may then at all times of the month and moon generally ſow Aſparagus, Coleworts, Spinage, Lettice, Parſnips, Raddiſh, and Chives.

In *February*, in the New of the Moon, ſhe may ſow Spike, Garlick, Borage, Bugloſe, Chervile, Coriander, Gourds, Creſſes, Marjoram, Palma Chriſti, Flowre gentle, white Poppy, Purſlain, Radiſh, Rocket, Roſemary, Sorrel, double Marygolds and Time. The Moon full ſhe may ſow Anniſeed, Musked violets, Beets, Skirrits, white Succory, Fennel, and Parſley. The Moon old, ſow Holy thiſtle, cole Cabadge, white cole, green cole, Cucumbers, Hartſhorn, Dyers grain, Cabadge, Lettice, Mellions, Onions, Parſnips, Larks heel, Burnet, and Leeks.

In *March*, the Moon new ſow Garlick, Borrage, Bugloſe, Chervile, Coriander, Gourds, Marjoram, white Poppy, Purſlain, Radiſh Sorrel, double Marigolds, Time, Violets. At the full Moon, Anniſeed, Beets, Skirrits, Succory; Fennel, Apples of Love, and Marvellous Apples. At the wain, Hartichokes, Baſill, Bleſſed-thiſtle, cole Cabbadge, white Cole, green cole, Citrons, Cucumbers, Hartſ-horn, Samphire, Spinage, Gilly-flowrs, Iſop, Cabadge, Lettice, Mellons, Mugrets, Onions, Flower Gentil, Burnet, Leeks, and Savory. In *May*, the Moon old, ſow bleſſed thiſtle. In *June*, the Moon new, ſow Gourds and Radiſhes. The moon old, ſow Cucumbers, Mellons, Parſnips. In *July*, the Moon at full, ſow white Succory; and the moon old, ſow Cabadge Lettice. Laſtly, in *Auguſt*, the Moon at the full, ſow white Succory.

Tranſplanting of herbs.

Alſo ſhe muſt know that Herbs growing of Seeds may be tranſplanted at all times, except Chervile, Arage, Spinage, and Parſley, which are not good being once tranſplanted: obſerving ever to tranſplant them in moiſt and rainy wether.

Choice of ſeedes.

Alſo ſhe muſt know that the choice of ſeeds are two fold of which ſome grow beſt being new, and Cucumbers and Leeks,

and

and ſome being old, as Coriander, Parſley, Beets, Origan, Savory, Creſſes, Spinage, and Poppy: you muſt keep cold Lettice, Hartichokes, Baſil, Holy thiſtle, Cabage, Cole, Dyers grain, and Mellions fifteen dayes after they put forth of the earth.

Alſo ſeeds proſper better being ſown in temperate weather then in hot, cold, or dry dayes. In the month of April the Moon being new, ſow Marjoram, Flowre-gentle, Time, Violets: in the full Moon Apples of Love, and marvellous apples; and in the Wain, Hartichokes, Holy thiſtle, Cabage, Cole, Citrons, Hartſhorn, Samphire Gillyflowres and Parſnips.

Seeds muſt be gathered in fair weather at the wain of the Moon, and kept ſome in Boxes of Wood, ſome in bags of Leather, and ſome in Veſſels of Earth, and after to be well cleanſed and dryed in the Sun or ſhadow: otherſome, as Onions, Chibols, and Leeks, muſt be kept in their husks: Laſtly, ſhe muſt know that it is beſt to plant in the laſt quarter of the Moon: to gather graſts in the laſt but one, and to graft two dayes after the change; and thus much for her Knowledge briefly of Hearbs, and how ſhe ſhall have them continually for her uſe in the Kitchin. Gathering of ſeeds.

It reſteth now that I proceed unto Cookery it ſelf, which is the dreſſing and ordering of meat, in good and wholſome manner; to which when our Houſwife ſhall addreſs her ſelf, ſhe ſhall well underſtand that theſe qualities muſt ever accompany it: Firſt, ſhe muſt be cleanly both in body and garments, ſhe muſt have a quick eye, a curious noſe, a perfect taſte, and ready ear; (ſhee muſt not be butter fingred; ſweet toothed, nor faint hearted) for the firſt will let every thing fall, the ſecond will conſume what it ſhould increaſe; and the laſt will loſe time with too much niceneſſe. Now for the ſubſtance of the Art it ſelf, I will divide it into five parts: The firſt, Sallets and Fricaſes; the ſecond, boyled Meats and Broths; the third, Roſte meats and Carbonadoes; the fourth Bak't meats and Pyes; and the fift banquetting and made diſhes, with other conceits and ſecrets. Of Cookery and the parts thereof.

Fift then to ſpeak of Sallets, there be ſome ſimple, ſome compounded, ſome onely to furniſh out the Table, and ſome both for uſe and adornation: your ſimple Sallets are Chibols Of Sallets, ſimple and plain.

pilled, waſht clean, and half of the green topps cut clean away, ſo ſerved on a fruit diſh, or Chives, Scallions, Radiſh-rootes, boyled Carrets, Skirrets, and Turnips. which ſuch like ſerved up ſimply: alſo, all young Lettice, Cabbage-lettice, Purſlane, and divers other herbs which may be ſerved ſimply without any thing but a little Vineger, Sallet Oyl, and Suger: Onions boyled, and ſtript from their rind, and ſerved up with Vineger, Oyle, and Pepper, is a good ſimple Sallet; ſo is Camphire, Bean cods, Sparagus, and Cucumbers, ſerved in likewiſe with Oyle, Vineger, and Pepper, with a world of others, too tedious to nominate.

Of compound Sallets.

Your compound Sallets, are firſt the young Buds and Knots of all manner of wholſome Herbs at their firſt ſpringing; as red Sage, Mint, Lettice, Violets, Marigolds, Spinage, and many other mixed together, and then ſerved up to the Table with Vinegar, Sallet-Oyle, and Suger.

Another compound Sallet.

To compound an excellent Sallet, and which indeed is uſuall at great Feaſts, and upon Princes Tables. Take a good quantity of blancht Almonds, and with your ſhredding knife cut them groſſely; then take as many Raiſins of the Sun clean waſht, and the ſtones pickt out, as many Figs ſhred like the Almonds, as many Capers, twice ſo many Olives, and as many Currants as of all the reſt, clean waſht: a good handfull of the ſmall tender leaves of red Sage and Spinage: mixe all theſe well together with good ſtore of Sugar, and lay them in the bottome of a great diſh; then put unto them Vineger and Oyl, and ſcrape more Suger over all: then take Oranges and Lemmons, and paring away the outward pilles, cut them into thinne ſlices, then with thoſe ſlices cover the Sallet all over; which done, take the fine thinne leafe of the red Cole flowre, and with them cover the Oranges and Lemmons all over; then over thoſe Red leaves lay another courſe of old Olives, and the ſlices of well pickled Cucumbers, together with the very inward heart of Cabbage lettice cut into ſlices, then adorn the ſides of the diſh, and the top of the Sallet with more ſlices of Lemons and Oranges, and ſo ſerve it up.

To make an excellent compound boyl'd Sallet: take of Spinage,

Spinage well waſht, two or three handfuls, and put into it fair water, and boyl it till it be exceeding ſoft, and tender as pap; then put it into a Cullander, and drain the water from it, which done, with the back ſide of your Chopping knife chop it, and bruiſe it as ſmall as may be; then put it into a Pipkin with a good lump of ſweet butter, and boyl it over againe; then take a good handfull of Currants cleane waſht, and put to it, and ſtir them well together; then put to as much Vinegar as will make it reaſonable tart, and then with Sugar ſeaſon it according to the taſte of the Maſter of the houſe, and ſo ſerve it upon ſippets. An excellent boyled Sallet.

Your preſerved Sallats are of two kinds, either pickled, as are Cucumbers, Samphire, Purſlan, Broom, and ſuch like; or preſerved with Vinegar, as Violets, Primroſe, Cowſlips, Gilly flowers, of all kinds, Broom-flowers, and for the moſt part any wholſome flower whatſoever. Of preſerving of Sallats.

Now for the pickling of Sallats, they are only boyled and then drained from the water, ſpread upon a Table, and good ſtore of ſalt thrown over them, then when they are thorough cold, make a pickle with water, ſalt, and a little vinegar, and with the ſame, pot them up in cloſe earthen pots, and ſerve them forth as occaſion ſhall ſerve.

Now for preſerving of Sallats; you ſhall take any of the flowers before-ſaid, after they have been pickt clean from their ſtalks, and the white ends (of them which have any) clean cut away, and waſht and dryed, and taking a glaſſe pot, like a Gally-pot, or for want thereof a gally-pot it ſelfe, and firſt ſtrew a little Sugar in the bottom, then lay a layer of the Flowers, then cover that layer over with Sugar, then lay another layer of the Flowers, and another of Sugar; and thus do one above another till the pot be filled, ever and anon preſſing them hard down with your hand: this done, you ſhall take of the beſt and ſharpeſt Vinegar you can get, (and if the Vinegar be diſtilled vinegar, the flowers will keep their colours the better) and with it fill up your pot till the Vinegar ſwim aloft, and no more can be received; then ſtop up the pot cloſe, and ſet them in a dry temperate place, and uſe them at pleaſure, for they will laſt all the year.

The making of Strange Sallets.

Now for the compounding of Sallats, of these pickled and preserved things, though they may be served up simply of themselves, and are both good and dainty; yet for better curiosity, and the finer adorning of the Table, you shall thus use them. First, if you would set forth any Red flower, that you know or have seen, you shall take your pots of preserved Gilliflowers, and suting the colours answerable to the flower you shall proportion it forth, and lay the shape of the Flower in a Fruit dish; then with your Purslan leaves, make the green Coffin of the Flower, and with the Purslan stalks, make the stalk of the flower, and the divisions of the leaves and branches; then with the thinne slices of Cowcumbers, make their leaves in true proportions, jagged or otherwise: and thus you may set forth some full blown, some halfe blown, and some in the bud, which will be pretty and curious. And if you will set forth yellow flowers, take the pots of Primroses and Cowslips, if blew flowers, then the pots of Violets, or Bugloss flowers; and these Sallets are both for shew and use, for they are more excellent for taste, then for to look on.

Sallets for shew only.

Now for Sallets for shew only, and the adorning and setting out of a Table with number of dishes, they be those which are made of Carret roots of sundry colours well boyled, and cut into many shapes and proportions, as some into Knots, some in the manner of Scutions, and Armes, some like Birds, and some like Wild Beasts, according to the Art and cunning of the Workman; and these for the most part are seasoned with Vinegar, Oyl, and a little Pepper. A World of other Sallets there are, which time and experience may bring to our Houswives eye, but the composition of them, and the serving of them, differeth nothing from these already rehearsed.

Of Fricases and Quelquechoses.

Now to proceed to your Fricases, or Quelquechoses, which are dishes of many compositions, and ingredients, as Flesh, Fish, Egs, Herbs, and many other things, all being prepared and made ready in a frying pan, they are likewise of two sorts, simple and compound.

Of simple Fricases.

Your simple Fricases are Egges and Collops fryed, whether the

the Collops be of Bacon, Ling, Beef, or young Pork, the frying whereof is so ordinary, that it needeth not any relation, or the frying of any Flesh, or Fish simple of it self with butter or sweet Oyl.

To have the best Collops and Egges, you shall take the whitest and youngest Bacom, and cutting away the sword, cut the Collops into thinne slices, lay them in a dish, and put hot water unto them, and so let them stand an hour or two, for that will take away the extream saltnesse; then drain away the water clean, and put them in a dry pewter dish, and lay them one by one, and set them before the heat of the fire, so as they may toast; and turne them so, as they may toast sufficiently thorow and thorow: which done, take your Egges and break them into a dish, and put a spoonfull of Vinegar unto them: then set on a clean Skillet with fair water on the fire, and as soon as the water boyleth, put in the Egges, and let them take a boyl or two; then with a spoon try if they be hard enough, and then take them up and trim them, and dry them, and then dishing up the Collops, lay the Eggs upon them, and so serve them up: and in this sort, you may poach Egges when you please, for it is the best and most wholesome. Best Collops and eggs.

Now the compound Fricases are those which consist of many things, as Tansies, Fritters, Pancakes, and any Quelquechose whatsoever, being things of great Request and Estimation in *France*, *Spain*, and *Italy*, and the most curious Nations. Of the compound Fricases.

First, then for making the best Tansie, you shall take a certain number of Eggs, according to the bignesse of your Frying-panne, and break them into a dish, abating ever the white of every third Egge: then with a spoon, you shall cleanse away the little white Chicken knots, which stick unto the yolks; then with a little Cream, beat them exceedingly together: then take of green Wheat blades, *Violet leaves*, *Strawbery leaves*, *Spinage*, and *Succory*, of each a like quantity, and a few *Walnut Tree buds*; chop and beat all these very well, and then strain out the juyce, and mixing it with a little more Cream, put it to the Egges, and stir all well together; then To make the best Tansey.

put in a few Crums of bread, fine grated bread, Cinamon, Nutmegge, and Salt; then put ſome ſweet Butter into the Frying-pan, and ſo ſoon as it is diſſolved or melted, put in the Tanſey, and fry it brown without burning, and with a diſh turn it in the panne as occaſion ſhall ſerve; then ſerve it up, having ſtrewed good ſtore of Sugar upon it, for to put in Sugar before, will make it heavy: Some uſe to put of the herb Tanſey into it, but the Walnut-tree buds do give the better taſt or relliſh, and therefore, when you pleaſe for to uſe the one, do not uſe the other.

The beſt Fritters. To make the beſt Fritters, take a pint of Cream and warm it; then take eight Egges, only abate four of the Whites, and beat them well in a diſh, and ſo mixe them with the Cream; then put in a little Cloves, Mace, Nutmeg, and Saffron, and ſtirre them well together; then put in two ſpoonfulls of the beſt Ale barm, and a little Salt, and ſtirre it again, then make it thick according unto your pleaſure with wheat flower; which done, ſet it within the air of the fire, that it may riſe and ſwell, which when it doth, you ſhall beat it in once or twice; then put into it a penny pot of Sack: all this being done, you ſhall take a pound or two of very ſweet ſeame, and put it into a panne, and ſet it over the fire, and when it is moulten, and beginnes to bubble, you ſhall take the Fritter-batter, and ſetting it by you, put thick ſlices of well pared Apples into the Batter, and then taking the Apples and Batter out together with a ſpoon, put it into the boyling ſeam, and boyl your Fritters criſpe and brown: And when you find the ſtrength of your ſeame conſume or decay, you ſhall renew it with more ſeame: and of all ſorts of ſeame, that which is made of the Beef ſuet is the beſt and ſtrongeſt: when your Fritters are made, ſtrew good ſtore of Sugar and Cinamon upon them, being faire diſht, and ſo ſerve them up.

The beſt Pancakes. To make the beſt Pancake, take two or three Egges, and break them into a diſh, and beat them well; then adde unto them a pretty quantity of fair running Water, and beat all well together: then put in Cloves, Mace, Cinamon, and Nutmeg, and ſeaſon it with Salt; which done, make it as thick as

you

you think good with fine Wheat-flower, then fry the Cakes as thinne as may be with ſweet butter, or ſweet ſeame, and make them brown, and ſo ſerve them up with Sugar, ſtrowed upon them. There be ſome which mixe Pancakes with new Milk or Cream, but that makes them tough, cloying and not ſo criſp, pleaſant and ſavory as running water.

To make the beſt Veale Toſts, take the Kidney, fat and all, of a loyn of Veale roſted, and ſhred it as ſmall as is poſſible; Then take a couple of Egges and beat them very well; which done, take Spinnage, Succory, Violet-leaves, and Marigold-leaves, and beat them, and ſtrain out the juyce, and mixe it with the Egges: then put it to your Veale, and ſtirre it exceedingly well in a diſh; then put to good ſtore of Currants clean waſht and pickt, Cloves, Mace, Cinamon, Nutmeg, Sugar, and Salt, and mixe them all perfectly well together: then take a manchet and cut it into Toſts, and toſt them well before the fire; then with a ſpoon lay upon the Toſt in a good thickneſſe, the Veal, prepared as before-ſaid; which done, put into your Frying-pan good ſtore of ſweet butter, and when it is well melted and very hot, put your Toſtes into the ſame with the bread ſide upward, and the fleſh ſide downward, and as ſoon as you ſee they are fryed brown, lay upon the upper ſide of the Toſts which are bare, more of the fleſh meat, and then turn them, and fry that ſide brown alſo; then take them out of the panne, and diſh them up, and ſtrow Sugar upon them, and ſo ſerve them forth. Veal Toſts.

There be ſome Cooks which will do this but upon one ſide of the Toſts, but to do it on both is much better; if you add Cream it is not amiſſe.

To make the beſt Panperdy, take a dozen Egges, and break them, and beat them very well; then put unto them Cloves, Mace, Cinamon, Nutmeg, and good ſtore of Sugar, with as much Sall as ſhall ſeaſon it: then take a Manchet, and cut it into thick ſlices like Toſtes; which done, take your Frying-panne, and put into it good ſtore of ſweet butter, and being melted, lay in your ſlices of bread, then powr upon them one half of your Egges, then when it is fryed, with a diſh turn your ſlices of bread upward, and then powre on them the other To make the beſt Pamperdy.

ther half of your Egges, and ſo turn them till both ſides be brown; then diſh it up, and ſerve it with Sugar ſtrewed upon it.

To make any Quelquechoſe

To make a Quelquechoſe, which is a mixture of many things together; take the Eggs and break them, and do away one half of the Whites, and after they are beaten, put them to a good quantity of ſweet Creame, Currants, Cinamon, Cloves, Mace, Salt, and a little Ginger, Spinage, Endive, and Mary-gold flowers groſſely chopt, and beat them all very well together; then take Pigges Pettitoes ſlic'd and groſſely chopt, mixe them with the Eggs, and with your hand ſtirre them exceeding well together; then put ſweet butter in your Frying-panne, and being melted, put in all the reſt, and fry it brown without burning, ever and anon turning it, till it be fryed enough; then diſh it up upon a flat plate, and ſo ſerve it forth. Onely here is to be obſerved, that your Pettitoes muſt be very well boyled before you put them into the Fry-caſe.

Additions to the Houſewife

And in this manner, as you make this Quelquechoſe, ſo you may make any other, whether it be of fleſh, ſmall Birds, ſweet Roots, Oyſters, Muſſels, Cockles, Giblets, Lemons, Oranges, or any Fruit, Pulſe, or other Sallat herb whatſoever, of which to ſpeak ſeverally, were a Labour infinite, becauſe they vary with mens opinions. Onely the compoſition, and work is no other than this before preſcribed; and who can do theſe, need no further inſtruction for the reſt. And thus much for *Sallets* and *Frioufes*.

Cookery.

To make Fritters.

To make Fritters another way; take Flower, Milk, Barm, grated bread, ſmall Raiſins, Cinamon, Sugar, Cloves, Mace, Pepper, Saffron, and Salt; ſtirre all theſe together very well with a ſtrong ſpoon, or ſmall ladle, then let it ſtand more than a quarter of an hour, that it may riſe; then beat it in again, and thus let it riſe, and be beat in twice or thrice at leaſt; then take it and bake them in ſweet and ſtrong ſeame, as hath been before ſhewed; and when they are ſerved up to the Table, ſee you ſtrow upon them good ſtore of Sugar, Cinamon, and Ginger.

To make the beſt white Puddings.

Take a pint of the beſt, thickeſt, and ſweeteſt Creame, and boyl

boyl it, then whilſt it is hot, put thereunto a good quantity of great ſweet Oatmeale Grots very ſweet, and clean picked, and formerly ſteept in milk twelve hours at leaſt, and let it ſoak in this Creame another night; then put thereto at leaſt eight yolkes of Egges, a little Pepper, Cloves, Mace, Saffron; Currants, Dates, Sugar, Salt, and great ſtore of Swines Suet, or for want thereof, great ſtore of Beef ſuet, and then fill it up in the farmes according unto the order of good Houſewiferie; and then boyl them on a ſoft and gentle fire, and as they ſwell, prick them with a great Pin, or ſmall Awl, to keep them that they burſt not; and when you ſerve them to the Table, (*which muſt not be untill they be a day old*) firſt boyl them a little, then take them out, and toaſt them brown before the fire, and ſo ſerve them, trimming the edge of the diſh either with Salt or Sugar.

Puddings of a Hogs Liver.

Take the Liver of a fat Hogge, and parboyl it; then ſhred it ſmall, and after beat it in a Morrar very fine; then mixe it with the thickeſt and ſweeteſt Cream, and ſtrain it very well through an ordinary ſtrainer: then put there to ſix yolkes of Egges and two Whites, and the grated crummes of (near hand) a penny White loave with good ſtore of Currants, Dates, Cloves, Mace, Sugar, Saffron, Salt, and the beſt Swines ſuet, or Beef-ſuet, but Beef-ſuet is the more wholſome, and leſſe looſning; then after it hath ſtood a while, fill it into the Farmes, and boyl them as before ſhewed: and when you ſerve them unto the Table, firſt boyl them a little, then lay them on a Gridiron over the coals, and broyl them gently, but ſcorch them not, nor in any wiſe break their skinnes, which is to be prevented by oft turning and toſſing them on the Gridiron, and keeping a ſlow fire.

To make bread puddings.

Take the Yolkes and Whites of a dozen or fourteen Egges, and having beat them very well, put unto them the fine powder of Cloves, Mace, Nutmegges, Sugar, Cinamon, Saffron, and Salt; then take the quantity of two loaves of white grated Bread, Dates (very ſmall ſhred) and great ſtore of Currants, with good plenty either of Sheeps, Hoggs, or Beef ſuet beaten and cut ſmall: then when all is mixt, and ſtirred well together, and hath ſtood a while to ſettle, then fill it into the

Farmes

Farms, as hath been before ſhewed, and in like manner boyl them, cook them, and ſerve them to the Table.

Rice puddings. Take halfe a pound of Rice, and ſteep it in new Milk a whole night, and in the morning drain it, and let the Milk drop away, and take a quart of the beſt, ſweeteſt, and thickeſt Cream, and put the Rice into it; and boyl it a little; then ſet it to cool an hour or two, and after put in the Yolkes of halfe a dozen Eggs, a little Pepper, Cloves, Mace, Currants, Dates, Sugar, and Salt; and having mixt them well together, put in great ſtore of Beef ſuet well beaten, and ſmall ſhred, and ſo put it into the farms, and boyl them as before ſhewed, and ſerve them after a day old.

Another of Liver. Take the beſt Hogs Liver you can get, and boyl it extreamly, till it be as hard as a ſtone, then lay it to cool; and being cold, upon a bread grater grate it all to powder; then ſift it through a fine Meal-ſive, and put to it the crummes of (at leaſt) two penny loaves of white bread, and boyl all in the thickeſt and ſweeteſt Cream you have, till it be very thick; then let it cool, and put to it the yolkes of halfe a dozen Egges, a little Pepper, Cloves, Mace, Currants, Dates ſmall ſhred, Cinamon, Ginger, a little Nutmeg, good ſtore of Sugar, a little Saffron, Salt, and of Beef, and Swines ſuet, great plenty, then fill it into the Farmes, and boyl them as before ſhewed.

Puddings of a Calves Mugget. Take a Calves Mugget, clean and ſweet dreſt, and boyl it well; then ſhred it as ſmall as is poſſible, then take of Strawberry leaves, of Endive, Spinage, Succory, and Sarnell, of each a pretty quantity, and chop them as ſmall as is poſſible, and then mixe them with the Mugget; then take the yolkes of half a dozen Egges, and three whites, and beat them into it alſo; and if you find it is too ſtiffe, then make it thinner with a little Creame warmed on the fire, then put in a little Pepper, Cloves, Mace, Cinamon, Ginger, Sugar, Currants, Dates, and Salt, and work altogether, with caſting in little pieces of ſweet butter one after another, till it have received good ſtore of butter, then put it up in the Calves-bag, Sheeps-bag, or Horſe-bag, and then boyl it well, and ſo ſerve it up.

Take

Take the blood of a Hogge whilſt it is warme, and ſteep it in a quart or more of great Oate-meal grotes, and at the end of three dayes with your hands take the Grotes out of the blood, and drain them clean; then put to thoſe Grotes more then a quart of the beſt Cream warm'd on the fire; then take mother of Time, Parſley, Spinage, Succory, Endive, Sorrel, and Straw berry leaves, of each a few chopt exceeding ſmall, and mixe them with the Grotes, and alſo a little Fennel-ſeed, finely beaten, then adde a little Pepper, Cloves, and Mace, Salt, and great ſtore of ſuet finely ſhred, and well beaten: then therewith fill your Forms, and boyl them, as hath been before deſcribed. A Pudding.

Take the largeſt of your Chines of Pork, and that which is called a Liſt, and firſt with your Knife cut the lean thereof into thinne ſlices, and then ſhred ſmall thoſe ſlices, and then ſpread it over the bottome of a diſh or woodden platter: then take the fat of the Chine and the liſte, and cut it in the very ſelf ſame manner, and ſpread it upon the lean, and then cut more lean, and ſpread it upon the fat, and thus do one lean upon another, till all the Pork be ſhred, obſerving to beginne and end with the lean: then with your ſharp Knife ſcotch it through and through divers wayes, and mixe it all well together: then take good ſtore of Sage, and ſhred it exceeding ſmall, and mixe it with the fleſh; then give it a good ſeaſon of Pepper and Salt, then take the formes made as long as is poſſible, and not cut in pieces as for puddings, and firſt blow them well to make the meat ſlip, and then fill them: which done, with threds divide them into ſeveral links as you pleaſe; then hang them up in the corner of ſome Chimny clean kept, where they may take air of the fire, and let them dry there at leaſt four dayes before any be eaten; and when they are ſerved up let them be either fryed, or broyled on the Grydiron, or elſe roaſted about a Capon. Links.

It reſteth now that wee ſpeak of boyl'd meat and brothes, which foraſmuch as our Houſwife is intended to be general, one that can as well feed the poor as the rich, we firſt begin with thoſe ordinary wholſome boyl'd meats which are of uſe in every good mans houſe; therefore to make the beſt ordinary Of boyled meats ordinary

nary

nary Pottage, you ſhall take a rack of mutton cut into pieces; or a leg of mutton cut into pieces; for this meat, and theſe joynts are the beſt although any other joynt or any freſh Beef will likewiſe make good Pottage, and having waſht your meat well, put it into a clean pot with fair water, and ſet it on the fire then take *Violet* leaves, *Succory*, *Strawbery* leaves, *Spinage*, *Langdebeef*, *Marygold* flowrs, *Scallions*, and a little *Parſley*, and chop them very ſmall together: then take half ſo much Oat meale well beaten as there is herbs, and mixe it with the herbs, and chop all very well togethr, then when the pot is ready to boyl, ſcum it very well, and then put in your Hearbs, and ſo let it boyl with a quick fire, ſtirring the meat oft in the pot, till the meat be boyl'd enough, and that the herbs and water are mixt together without any ſeparation, which will be after the conſumption of more then a third part: Then ſeaſon them with ſalt and ſerve them up with the meat, either with ſippets or without.

Pottage without ſight of herbs.

Some deſire to have their pottage green, yet no hearbs to be ſeen, in this caſe, you muſt take your hearbs and oat meal, and after it is chopt put it into a ſtone morter, or bowl; and with a wooden peſtel beat it exceedingly, then with ſome of the warme liquor in the pot, ſtrain it as hard as may be, and ſo put it in and boyl it.

Pottage without herbs.

Others deſire to have pottage without any herbs at all, and then you muſt only take Oat meal beaten, and good ſtore of Onions and put them in, and boyl them together; and thus doing you muſt take a greater quantity of oat meal then before.

Pottage with herbs.

If you will make pottage of the beſt and daintieſt kind, you ſhall take Mutton, Veal or Kidde, & having broken the bones but not cut the fleſh in pieces, and waſht it, put it into a pot with fair water; after it is ready to boyl, and throughly skumm'd, you ſhall put in a good handfull or two of ſmall Oat meal: and then take whole Lettice, of the beſt and moſt inward leaves, whole Spinage, Endive, Succory, and whole leaves Cole flowrs or the inward part of white Cabbage, with two or three ſlic't Onions: put all into the pot, and boyl them well together till the meat be enough, and the Hearbs ſo ſoft as may be, and ſtirre them oft well together; and then ſeaſon it with ſalt, and as much Ver-

juyce

juyce as will only turn the taſt of the Pottage; and to ſerve them up, covering the meat with the whole herbs; and adorning the diſh with ſippets.

To make ordinary ſtew'd broth. To make ordinary ſtew'd broth, you ſhall take a neck of Veal or a legg, or mary bone of beef, or a pullet, or mutton, and after the meat is waſht, put it into a pot with fair water, and being ready to boly, skumme it well: then you ſhall take a couple of Manchets, and paring away the cruſt, cut it into thick ſlices, and lay them in a diſh, and cover them with hot broth out of che the pot; when they are ſteept, put them and ſome of the broth into a ſtrainer and ſtrain it, and then put it into a pot: then take halfe a pound of Prunes, halfe a pound of Raiſins, and a quarter of a pound of Currants cleane pickt and waſht, with a little whole Mace, and two or three bruiſed Cloves, and put them into the pot, and ſtirre all well together, and ſo let them boyle till the meat be enough, then if you will alter the colour of the broth, put in a little Turnſoyle, or red Sanders, and ſo ſerve it upon ſippets, and the fruit uppermoſt.

A fine boyled meat. To make an excellent boyled meat, take four pieces of a rack of mutton, and waſh them clean, and put them into a pot well ſcoured with fair water; then take a good quantity of Wine and Verjuyce, and put it into it; then ſlice a handfull of Onions, and put them in alſo, and ſo let them boyl a good while, then take a piece of ſweet Butter with Ginger and Salt, and put it to alſo, and then make the broth thick with grated bread, and ſo ſerve it forth with ſippets.

To boyl a Mallard. To boyl a *Mallard* curiouſly, take the *Mallard* when it is fair dreſſed, waſhed and truſt, and put it on a ſpit and roaſt it till you get the gravy out of it: then take it from the ſpit and boyl it, then take the beſt of the broth into a pipkin, and the gravy which you ſaved, with a peece of ſweet butter, and Currants Vineger, Pepper, and grated Bread: Thus boyl all theſe together, and when the *Mallard* is boyled ſufficiently, lay it on a diſh with ſippets, and the broth upon it, and ſo ſerve it forth.

To make an excellent *Olepotride*, which is the onely principall

pall diſh of boyled meat which is eſteemed in all *Spain*: you ſhall take a very large veſſel pot or Kettle, and filling it with water, you ſhall ſet it on the fire, and firſt put in good thick gobbets of well fed beef, and being ready to boyl, skum your pot; when the beef is half boyled, you ſhall put in it Potato-roots, Turneps and Garrets: alſo like gobbets of the beſt Mutton, and the beſt Pork; after they have boyled a while: you ſhall put in the like gobbets of Veniſon red and Fallow if you have them; then the like gobbets of Veal, Kid, and Lamb a little ſpace after theſe, the fore parts of a fat Pigge, and a cramb'd Pullet: then put in Spinage, Endive, Succory, Marygold leaves and flowrs, Lettice, Violet leaves, Strawberry leaves, Bugloſſe and Scallions all whole and unchopt, then when they have boyled a while, put in a Partridge and a Chicken chopt in pieces, with Quails, Rayles, Black birds, Larks, Sparrowes, and other ſmall birds, all being well and tenderly boyled, ſeaſon up the broth with good ſtore of Suger, Cloves, Mace, Cinamon, Ginger, and Nutmeg, mixt together in a good quantity of Verjuyce and Salt, and ſo ſtirre up the pot well from the bottome: then diſh it up upon great Charges or long Spaniſh Diſhes made in ſtore of ſippets in the bottome: then cover the meat all over with Prunes, Raiſins, Currants, and blancht Almonds, boyled in a thing by themſelves; then cover the fruit and the whole boyled herbs, and the herbs with ſlices of Oranges and Lemmons, and lay the roots round about the ſides of the diſh, and ſtrew good ſtore of Sugar over all, and ſo ſerve it forth.

To make the beſt white broth.

To make the beſt white broth, whether it be with Veal Capon, Chickins, or any other foul or Fiſh: Firſt boyl the fleſh or Fiſh by it ſelf, then take the value of a quart of ſtrong Mutton broth, or ſad Kid broth, and put it into a pipkin by it ſelf, and put into it a bunch of Time, Marjoram, Spinage, and Endive bound together; then when it ſeeths, put in a pretty quantity of Beefe-marrow, and the marrow of mutton with ſome whole Mace and a few bruiſed Cloves: then put in a pint of White wine with a few whole ſlices of Ginger: after they have boyled a while together, take blancht Almonds, and having beaten them together in a morter with ſome of the broth, ſtrain them and put

put it in alſo ; then in another Pipkin boyl Currants, Prunes, Raiſins and whole Cinamon in Verjuyce and Suger with a few ſliced Dates ; and boyl them till the verjuyce be moſt part conſumed, or at leaſt come to ſirrup ; then drain the fruit from the ſirrup, and if you ſee it be high coloured, make it white with ſweet cream warmed, and ſo mixe it with your Wine broth : then take out the Capon or the other fleſh or Fiſh, and diſh it up dry in a diſh ; then pour the broth upon it, and lay the fruit on the top of the meat, and adorn the ſide of the diſh with very dainty ſippets, Firſt Orenges, Lemons and Suger, and ſo ſerve it forth to the table.

To boyl any wild Fowl, *Mallard*, *Teal*, *Widgeon*, or ſuch like : Firſt boyl the Fowl by it ſelf, then take a quart of ſtrong Mutton broth, and put it into a Pipkin and boyl it ; then put unto it good ſtore of ſliced Onions, a bunch of ſweet pot herbs and a lump of ſweet butter : after it hath boyled well, ſeaſon it with verjuyce ſalt and ſuger, and a little whole Pepper ; which done, take up your fowl and break it according to the faſhion of carving, and ſtick a few Cloves about it ; then put it into the broth with Onions, and there let it take a boyl or two, and ſo ſerve it and the broth forth upon the ſippets : ſome uſe to thicken it with toaſts of bread ſteept and ſtrained, but that is as pleaſes the Cook. To boyl any wild fowl.

To boyl a legge of *Mutton*, or any other joynt of meat what ſoever ; firſt after you have waſht it clean, par-boyl it a little, then ſpit it and give it halfe a dozen turnes before the fire, then draw it when it begins to drop, and preſſe it between two diſhes, and ſave the gravy ; then ſlaſh it with your Knife, and give it halfe a dozen turnes more, and then preſſe it again, and thus doe as often as you can force any moyſture to come from it ; then mixing Mutton broath, White Wine, and Verjuyce together, boyl the Mutton therein till it be tender, and that moſt part of the liquor is cleane conſumed ; then having all that while kept the gravy you took from the Mutton ſtewing gently upon a Chafing diſh and coals, you ſhall adde unto it good ſtore of Salt, Suger, Cinamon and Ginger, with ſome Lemon ſlices, and a little of an Orenge peel, with a few fine white bread crummes : then taking up the Mutton, put the remainder of the broath in To boyl a leg of Mutton.

and put in likewiſe the gravy, and then ſerve it up with ſippets, laying the Lemmon ſlices uppermoſt, and trimming the Diſh about with ſugar.

If you will boyl Chickens, young Turkeys, Pea-hens, or Houſe fowle daintily; you ſhall, after you have trimmed them, drawn them, truſt them; and waſht them, fill their belleys as full of Parſley as they can hold: then boyle them with Salt and water onely, till they be enough: then take a diſh and put into it Verjuyce and Butter, and Salt, and then when the butter is melted, take the Parſly out of the Chickens belly, and mince it very ſmall, and then put it to the Verjuyce and Butter: and ſtir it well together; then lay in the Chickens, and trimme the diſh with ſippets and ſo ſerve it forth.

A broth for any freſh fiſh.

If you will make broth with any freſh Fiſh whatſoever, whether it be Pike, Bream, Carp, Eele, Barbel, or ſuch like: you ſhall boyl water, Verjuyce and Salt together with a handfull of ſliced Onyons; then you ſhall thicken it with two or three ſpoonfulls of Ale barm, then put in a good quantity of whole Barberies, both branches and other, as alſo pretty ſtore of Currants: then when it is boyled enough, Diſh up your Fiſh and poure your broth unto it, laying your fruit and Onyons uppermoſt. Some to this broth will put Prunes and Dates ſliced, but it is according to the fancy of the Cook, or the Will of the Houſholder.

Additions to boyl meat.

Thus I have from theſe few preſidents ſhewed you the true Art and making of all ſorts of boyled meats, and broths and though men may coyn ſtrange names, and feign ſtrange Arts, yet be aſſured ſhe that can do theſe, may make any other whatſoever, altering the taſt by the alteration of the compounds as ſhe ſhall ſee occaſion; And when a broth is too ſweet, to ſharpen it with Verjuyce, when too tart to ſweeten it with Suger; when flat and wallowiſh, to quicken it with Orenges and Lemmons; and when too bitter to make it pleaſant with herbs and ſpices.

A Mallard ſmoared, or a Hare, or old Couy.

Take a Mallard when it is clean dreſſed, waſhed and truſt, and parboyl it in water, till it be skumm'd and purified: then take it up, and put it into a Pipkin with the neck downward, and the tayl upward, ſtanding as it were, upright: then fill the

Pipkin

Pipkin half full with that water, in which the Mallard was parboyled, and fill up the other half with white wine: then peel and ſlice thin a good quantity of Onyons, and put them in with whole fine hearbs, according to the time of the year, as Lettice, Strawbery leaves, Violet leaves, Vine leaves, Spinage, Endive, Succory, and ſuch like, which have no bitter or hard taſte, and a pretty quantity of Currants and Dates ſliced: then cover it cloſe, and ſet it on a gentle fire, and let it ſtew, and ſmoar till the hearbs and onyons be ſoft, and the Mallard enough, then take out the Mallard, and Carve it as if it were to go to the Table: then to the broth put a good lump of butter, Suger, Cinamon; and if it be in Summer, ſo many Gooſeberryes as will give it a ſharp taſte, but in the Winter, as much Wine vineger then heat it on the fire and ſtir all well together: then lay the Mallard in a diſh with ſippets, and pour all this broth upon it, then trim the edge of the diſh with Suger, and ſo ſerve it up. And in this manner you may alſo ſmoar the hinder parts of a Hare, or a whole old Cony, being truſt up cloſe together.

After your Pike is dreſt and opened in the backs and laid flat, as if it were to frye, then lay it in a large diſh for the purpoſe, able to receive it; then put as much White wine to it, as will cover it all over; then ſet it on a chafingdiſh and coals to boyl very gently, and if any skum ariſe, take it away; then put to it Currants, Sugar, Cynamon, Barbery berries, and as many Prunes as will ſerve to garniſh the diſh, then cover it cloſe with another diſh and let it ſtew till the fruit be ſoft, and the Pike enough; then put to it a good lump of ſweet butter; then with a fine skummer, take up the fiſh, and lay it in a clean diſh with ſippets, then take a couple of yolks of eggs, the film taken away, and beat them well together with a ſpoonfull or two of Creame, and as ſoon as the Pike is taken out put it into the broath and ſtir it exceedingly, to keep it from curding; then pour the broth upon the Pike, and trim the ſides of the diſh with Suger, Prunes, and Barberies, ſlices of Orenges or Lemmons, and ſo ſerve it up. And thus may you alſo ſtew Roches, Gurnets, or almoſt any ſea fiſh or freſh fiſh. To ſtew a pike

Take a Lambs head and Purtenance, clean waſht and pickt, and put it into a Pipkin with fair water, and let it boyl, and skum To ſtew a Lambs head & Purtenance.

skumme it clean, then put Currants and a few sliced Dates, and a bunch of the best farcing herbs tyed up together, and so let it boyl well till the meat be enough; then take up the Lambs head and Purtenance, and put it into a clean dish with sippets; then put in a good lump of butter, and beat the yolks of two egs with a little Cream, and put it to the broth with Suger, Cinamon, and a spoonfull or two of Verjuyce and whole Mace, and as many Prunes as will garnish a dish, which should be put in when it is but halfe boyled, and so poure it upon the Lambs head and Purtenance, and adorn the sides of the dish with Sugar, Prunes, Barberies, Orenges, and Lemons, and in no case forget not to season it well with salt, and to serve it up.

A Breast of Mutton stew'd.

Take a very good breast of Mutton chopt into sundry large peeces, and when it is clean washt, put it into a pipkin with fair water, and set it on the fire to boyl; then skumme it very well, then put in of the finest parsnips cut into large peeces as long as ones hand, and clean washt and scrapt; then good store of the best Onyons, and all manner of sweet pleasant Pot herbs and Lettice, all grossely chopt, and good store of Pepper and Salt, and then cover it, and let it stew till the Mutton be enough, then take up the mutton, and lay it in a clean dish with sippets, and to the broth put a little wine vinegar, and so poure it on the mutton with the Parsenips whole, and adorn the sides of the dish with Suger, and so serve it up. And as you do with the breast, so you may doe with any other joynt of Mutton.

To stew a Neats foot.

Take a Neats foot that is very well boyld (for the tenderer it is the better it is, and cleave it in two, and with a clean cloath dry it well from the Souse-drink, then lay it in a deep earthen platter and cover it with Verjuyce, then set it on a Chafingdish and coals and put to it a few Currants and as many Prunes as will garnish the dish, then cover it and let it boyl well, many times stirring it up with your Knife, for fear it stick to the bottom of the dish; then when it is sufficiently stewed, which will appear by the tenderness of the meat and softness of the fruit, then put in a good lump of butter, great store of Suger and Cinamon; and let it boyl a little after, then put it altogether into a clean dish with sippets and adorn the sides of the dish with Suger and Prunes, and so serve

Of Roast

that in the generall knowledge thereof are to be obſerved theſe few rules. Firſt the clean keeping and ſcouring of the ſpits and cob-irons; next the neat picking and waſhing of meat, before it be ſpitted, then the ſpitting and broaching of meat, which muſt be done ſo ſtrongly and firmly, that the meat may by no means either ſhrink from the ſpit, or elſe turn about the ſpit: & yet ever to obſerve that the ſpit do not go through any principal part of the meat, but ſuch as is of leaſt account and eſtimation; and if it be birds, or fowl which you ſpit, then to let the ſpit go through the hollow of the body of the fowl, and ſo faſten it with pricks or skewers under the wings about the thighs of the fowl, and at the feet or Rump, according to your manner of truſſing and dreſſing them. Obſervations in roaſt meats. Spitting of roaſt meats.

Then to know the Temperatures of fires for every meat, and which have a ſlow fire, and yet a good one, taking leaſure in roaſting, as Chines of Beef, Swans, Turkies, Peacocks, Buſtards, and generally any great large Fowle, or any other Joynts of Mutton, Veal, Duck, Kidde, Lamb, or ſuch like: whether it be Veniſon red or Fallow; which indeed would lye long at the fire, and ſoak well in the roaſting, and which would have a quick and ſharp fire without ſcorching; as Piggs, Pullets, Pheaſants, Partridges, Quails, and all ſorts of middle ſized, or leſſe fowl, and all ſmall birds, or compound roaſt meats, as Olives of Veal, Haſlets; a pound of butter roaſted, or puddings ſimple of themſelves, and many other ſuch like, which indeed would be ſuddenly and quickly diſpatcht, becauſe it is intended in Cookery, that one of theſe diſhes muſt be made ready whilſt the other is in eating. Then to know the complexions of meats, as which muſt be pale and white roaſted, and yet throughly roaſted, as Mutton, Lamb, Kid, Capon, Pullet, Pheaſant, Partridge, Veal, Quaile; and all ſorts of middle and ſmall land or water Fowl, & all ſmall birds; which muſt be ſo brown roaſted, as Beef, Veniſon, Porke, Swan, Geeſe, Piggs, Crane, Buſtards, or any large Fowl, or other thing whoſe fleſh is black. Temperature of fires. The complexions of meat.

Then to know the beſt baſtings for meat, which is ſweet Butter, ſweet Oyl, Barrel butter, or fine rendred up ſeam, with Cinamon, Cloves, and Mace. There be ſome that will baſte onely with Water and Salt, and nothing elſe: The beſt baſtings of meats

yet it is but opinion, and that muſt be the worlds Maſter alwayes.

The beſt dredging.

Then the beſt dredging, which is either fine white bread crums, well grated; or elſe a little very white meal, and the crumms very well mixt together.

To know when meat is enough.

Laſtly to know when meat is roſted enough; for as too much rawneſſe is unwholſome, ſo too much dryneſs is not nouriſhing. Therefore to know when it is in the perfect height, and is neither too moiſt nor too dry, you ſhall obſerve theſe ſigns: Firſt, in your large joynts of meat, when the ſteam or ſmoak of the meat meat aſcendeth, either upright or elſe goeth from the fire, when it beginneth a little to ſhrink from the ſpit, or when the gravy which droppeth from it is cleer without bloodyneſſe, then is the meat enough.

If it be a Pigge, when the eyes are fallen out, and the body leaveth Piping: for the firſt is when it is half roaſted, and would be ſindged to make the coat riſe, and crackle, and the latter when it is full enough, and would be drawn: or if it be any kind of Fowl you roaſt, when the thighs are tender, or the hinder parts of the pinions at the ſetting on of the wings, are without blood, then be ſure that your meat is fully enough roaſted: yet for a better and more certain aſſuredneſſe, you may thruſt your Knife into the thickeſt parts of the meat, and draw it out again, and if it bring out white gravy without any bloodineſſe, then aſſuredly it is enough, and may be drawn with all ſpeed convenient, after it hath been well baſted with butter not formerly melted, then dredging as aforeſaid, then baſted over the dredging and ſo ſuffered to take two or three turnes, to make criſpe the dredging: Then diſh it in a fair diſh with ſalt ſprinkled over it, and ſo ſerve it forth. Thus you ſee the general form of roaſting all kind of meat: Therefore now I will return to ſome particular diſhes, together with their ſeveral ſawces.

Roaſting of Mutton with Oyſters.

If you will roaſt Mutton with Oyſters, take a ſhoulder alone or a legge, and after it is waſht, parboyl it a little: then take the great Oyſters and having opened them into a diſh, drain the gravy clean from them twice or thrice, then parboyl them a little, then take Spinage, Endive, Succory, Straw berry leaves, Violet leaves & a little Parſly, with ſome Scallions; chop theſe very ſmall toge-

together, then take your Oyſters very dry draind and mix them with an half part of theſe herbs : then take your meat and with theſe Oyſters and herbs farce or ſtop it, leaving no place empty, then ſpit it and roaſt it, and whilſt it is in roſting, take good ſtore of Verjuyce and Butter, and Salt, and ſet it in a diſh on a chaffing diſh and coals ; and when it begins to boyl put in the remainder of your herbs without Oyſters and a good quantity of Currants, with Cinamon, and the yolks of a couple of eggs, And after they are well boyled and ſtirred together, ſeaſon it up according to your taſte with Suger ; then put in a few Lemmon ſlices ; the meat being enough draw it, and lay it upon this ſawce removed into a clean diſh, the edge thereof being trimmed about with Suger and ſo ſerve it forth.

To roſt a Leg of Mutton after an Outlandiſh faſhion, you ſhall take it after it is waſh'd, and cut off all the fleſh from the bone leaving onely the outmoſt skinne intirely whole and faſt to the bone; then take thick Cream and the yolks of eggs, and beat them exceedingly well together ; then put to Cinamon, Mace, and a little Nutmegge with Salt : then take bread crumms, finely grated and ſearſt with good ſtore of Currants, and as you mixe them with the Cream, put in Suger and ſo make it into a good ſtiffneſſe : Now if you would have it look green, put in the juyce of ſweet herbs, as Spinage, Violet leaves, Endive, &c. If you would have it yellow, then put in a little Saffron ſtrained, and with this fill up the skin of your legge of Mutton in the ſame ſhape and form that it was before, and ſtick the out ſide of the skinne thick with Cloves, and ſo roaſt it throughly and baſte it very well, then after it is dredg'd ſerve it up as a legge of Mutton with this pudding, for indeed it is no other, you may ſtop any other joynt of meat, as breſt or loyn, or the belly of any fowl boyled or roaſt, or Rabbet or any meat elſe which hath skin or emptineſt, If into this pudding alſo you beat the inward pith of an Oxes back, it is both good in taſte, and excellent ſoveraign for any diſeaſe, ach, or flux in the reins whatſoever. To roaſt a leg of Mutton otherwiſe.

To roaſt a Gigget of Mutton, which is the legge ſplatted and half part of the loyn together, you ſhall after it is waſht ſtop it with Cloves, ſo ſpit it and lay it to the fire, and tend it well with baſting ; then you ſhall take Vineger, Butter, and To roaſt a Gigget of Mutton.

Currants, and ſet them on a fire in a diſh or pipkin ; then when it boyles you ſhall put in ſweet herbes finely chopt, with the yolk of a couple of eggs, and ſo let them boyl together : then the meat being half roſted, you ſhall pare off ſome part of the leaneſt and brown, then ſhred it very ſmall, and put it into the pipkin alſo : then ſeaſon it up with Suger, Cinamon, Ginger, and Salt, and ſo put it into a clean diſh, then draw the Gigget of Mutton and lay it on the ſauce, and throw ſalt on the top and ſo ſerve it up.

To roaſt Olives of Veal.

You ſhall take of a legge of Veal and cut the fleſh from the bones, and cut it out into thin long ſlices : then take ſweet herbs, and the white part of Scallions, and chop them well together with the yolks of eggs, then role it up within the ſlices of Veal, and ſo ſpit them and roaſt them : then boyl Verjuyce, Butter, Suger, Cinamon, Currants and ſweet herbs together, and being ſeaſoned with a little ſalt, ſerve the Olives up upon the ſauce with ſalt caſt over them.

To Roaſt a Pigge.

To roſt a Pigge curiouſly, you ſhall not ſcald it, but draw it with the hair on, then having waſht it, ſpit it and lay it to the fire, ſo as it may not ſcorch, then being a quarter roaſted, and the skinne bliſtered from the fleſh with your hand pull away the hair and skin, and leave all the fat and fleſh perfectly bare : then with your knife ſcotch all the fleſh down to the bones, then baſte it exceedingly with ſweet butter and Cream, being no more but warm : then dredge it with fine bread crums, currants, ſuger, and ſalt mixt together ; and thus apply dredging upon baſting, and baſting upon dredging, till you have covered all the fleſh a full inch deep : Then the meat being fully roſted, draw it, and ſerve it up whole.

To Roaſt a pound of Butter well.

To roaſt a pound of butter curiouſly and well, you ſhall take a pound of ſweet butter, and beat it ſtiff with Suger and the yolks of Eggs, then clap it round wiſe about a ſpit, and lay it before a ſoft fire, and preſently dredge it with the dredging before appoynted for the Pig : then as it warmeth or melteth, ſo apply it with dredging till the butter be overcommed and no more will melt to fall from it : then roaſt it brown, and ſo draw it, and ſerve it out, the diſh being as neatly trim'd with Suger as may be.

To roaſt a pudding upon a ſpit you ſhall mixe the pudding be-

before ſpoken of in the leg of Mutton, neither omitting herbs or ſaffron, and put to a little ſweet butter and mixe it very ſtiff, then fold it about the ſpit, and have ready in another diſh ſome of the ſame mixture well ſeaſoned, but a great deal thinner, and no butter at all in it; and when the pudding doth begin to roaſt, and that the butter appears, then with a ſpoon cover it all over with the thinner mixture, and ſo let it roſt: then if you ſee no more butter appear, then baſte it as you did the Pigge, and lay more of the mixture on, and ſo continue till all be ſpent; and then roaſt it brown and ſo ſerve it up. To Roaſt a pudding on a ſpit.

If you will Roaſt a Chine of Beef, a loyn of Mutton, a Capon, and a Lark, all at one inſtant, and at one fire, and have all redy together and none burnt you ſhall firſt take your Chine of Beef and parboyl it more than half through: Then firſt take your Capon, being large and fat, and ſpit it next the hand of the turner, with the leggs from the fire, then ſpit the Chine of Beef then the Lark, and laſtly the loyn of Mutton, and place the Lark ſo as it may be covered over with the beef and the fat part of the Loyn of Mutton, without any part diſcloſed; then baſte your Capon and your loyn of Mutton with cold water and ſalt, the Chine of beef with boyling Lard, then when you ſee the beef is almoſt enough, which you ſhall haſten by ſcotching and opening of it, then with a clean cloath you ſhall wipe the Mutton and Capon all over, and then baſte it with ſweet butter till all bee enough roſted; then with your knife lay the Lark open, which by this time will be ſtewed between the beef and mutton, and baſting it alſo with dredge altogether, draw them and ſerve them up. To Roaſt a Chine of Beef, Loyn of Mutton, Lark and Capon at one fire, and at one inſtant.

If you will Roaſt any Veniſon, after you have waſht it & clenſed all the blood from it, you ſhall ſtick it with cloves all over on the outſide; & if it be leane, you ſhall lard it either with mutton lard, or pork lard, but mutton is the beſt: then ſpit it and roſt it by a ſoaking fire, then take vineger, bread crumms, and ſome of the gravy which comes from the veniſon, and boyl them well in a diſh: then ſeaſon it with ſuger, cinamon, ginger and ſalt, and ſerve the veniſon forth upon the ſawce when it is roſted enough. To Roaſt Veniſon.

If you will Roaſt a piece of freſh Sturgeon, which is a dainty diſh, you ſhall ſtop it with Cloves, then ſpit it, and let it Roaſt at great leiſure, plying it continually with baſting, which will take

take a way the hardneſſe: then when it is enough you ſhal draw it and ſerve it upon Veniſon ſawce, with ſalt only ſhrown upon it.

The Roaſting of all ſorts of meats differeth nothing but in the fire, ſpeed and leiſure as is aforeſaid, except theſe compound diſhes, of which I have given you ſufficient preſidents, and by them you may perform any work whatſoever: but for the ordering, preparing, and truſſing your meat for the ſpit or Table, in that there is much difference: for in all joynts of meat except a ſhoulder of Mutton, you ſhall cruſh and break the joynts well; from Pigges and Rabbets you ſhall cut off the feet before you ſpit them, and the heads when you ſerve them to the Table; and the Pigg you ſhall chine and divide into two parts: Capons, Pheaſant, Chickens, and Turkies you ſhall roaſt with the Pinions folded up, and the legges extended: Hens, Stock-doves, and Houſ doves, you ſhall Roſte with the Pinions folded, and the legs cut off by the knees and thruſt into the bodies: Quails, Partridges, and all ſorts of ſmall Birds ſhall have their Pinions cut away, and the legs extended: all ſorts of Water fowl ſhall have their Pinions cut away, and their legs turned backwards: Wood cocks, Snipes and Stint ſhall be Roaſted with their Heads and Necks on, and their legs thruſt into their bodyes, and Shovelers and Bitturns ſhall have no necks but their heads only.

To Roaſt a Cows Udder. Take a Cows Udder, and firſt boyl it well; then ſtick it thick all over with Cloves: then when it is cold ſpit it, and lay it on the fire, and apply it very well with baſting of ſweet butter, and when it is ſufficiently roſted and brown, then dredge it, and draw it from the fire, take vinegar and butter, and put it on a chaffingdiſh and coals, and boyl it with White bread crum, till it be thick: then put to it good ſtore of Suger and cynamon, and putting it into a clean diſh, lay the Cows Udder therein, and trim the ſides of the diſh with Suger, and ſo ſerve it up.

To Roaſt a Fillet of Veal. Take an excellent good leg of Veal, and cut the thick part thereof, a handfull and more from the Knucle: then take the thick part (which is the fillet) and farce it in every part all over with Strawbury leaves, Sorrell, Spinage, Endive, and Suc-

Succory groſſely chopt together, and good ſtore of Onions, then lay it to the fire and roaſt it very ſufficiently and brown, caſting good ſtore of Salt upon it, and baſting it well with ſweet butter: then take of the former herbs much finer chopt than they were for farcing, and put them into a Pipkin with Vinegar and clean waſht Currants, and boyl them well together; then when the herbs are ſufficiently boyled and ſoft, take the yolks of foure very hard boyled Eggs, and ſhred them very ſmall, and put them into the Pipkin alſo with Suger and Cinamon and ſome of the gravy which drops from the Veal, and boyl it over again, and then put it into a clean diſh, and the fillet being dredged and drawn, lay upon it and trim the ſide of the diſh with Suger, and ſo ſerve it up.

To make an excellent Sauce for a roſt Capon, you ſhall take Onions, and having ſliced and peeled them, boyle them in fair water with Pepper, Salt, and a few bread crummes: then put unto it a ſpoonfull or two of claret Wine, the juyce of an Orenge, and three or four ſlices of Lemmon peel: all theſe ſhred together, and ſo pour it upon the Capon being broke up.

To make a ſawce for an old Hen or Pullet, take a good quantity of Beer and Salt, and mixe them well together with a few fine bread crummes, and boyl them on a chaffing diſh and coals; then take the yolks of three or four hard Egges, and being ſhred ſmall put it to the beer, and boyl it alſo; then the Hen being almoſt enough, take three or four ſpoonfulls of the gravy which comes from her, and put it in alſo, and boyl all together to an indifferent thickneſs: which done, ſuffer it to boyl no more, but only to keep it warm on the fire, and put into it the juyce of two or three Orenges, and the ſlices of Lemmon-peels ſhred ſmall, and the ſlices of Orenges, having alſo the upper rind taken away: then the Hen being broke up, take the brains thereof, and ſhredding them ſmall, put it into the ſawce alſo, and ſtirring all well together, put it hot into a clean warme diſh, and lay the Henne (broke up) in the ſame.

The Sawce for Chickens is divers, according to mens taſtes: for ſome will onely have Butter, Verjuyce, and a little Parſly

Parſley roſted in their bellies mixt together; others will have butter, verjuyce, and Suger boyl'd together with toaſts of bread and others will have thick ſippets with the juyce of ſorrel and ſuger mixt together.

The beſt ſawce for a Pheſant is water and Onions ſliced, Pepper and a little Salt mixt together, and but ſtewed upon the coals, & then poured upon the Pheſant or Partridge, being broken up, and ſome will put thereto the juyce or ſlices of an Orange or Lemon, or both: but it is according to taſte, and indeed more proper for Pheſant then Partridge.

Sauce for a Quail, Raile, or any fat big bird, is Claret wine and ſalt mixt together with the gravy of the bird, and a few fine bread crumms well boyled together, and either a Sage leaf, or Bay leaf cruſht amongſt it, according to mens taſtes.

Sauce for Pigeons. The beſt ſauce for Pidgeons, Stock doves, or ſuch like, is Vinigar and butter melted together and parſly roſted in their bellyes, or Vine leaves roſted and mixed well together.

A general ſauce for wild fowl. The moſt generall ſauce for ordinary wild fowl roſted, as Ducks, Mallard Widgeon, Teal, Snipe, Sheldrake, Plovers, Puets, Guls, and ſuch like, is only Muſtard and Vineger, or Muſtard and Verjuyce mixt together; or elſe an Onion, Water, and Pepper, and ſome (eſpecially in the Court) uſe only butter melted, and not with any thing elſe.

Sauce for green Geeſe. The beſt ſauce for green Geeſe is the juyce of Sorrel and Suger mixt together with a few ſcalded Feberries, and ſerved up on ſippets; or elſe the belly of the green Gooſe fild with Feberries and ſo roſted; and then the ſame mixt with Verjuyce, Butter, Suger and Cinamon and ſo ſerved up on ſippets.

Sauce for ſtubble Geeſe. The Sawce for a ſtubble Gooſe is divers, according to mens minds, for ſome will take the pap of roſted Apples, and mixing it with vinegar, boyl them together on the fire with ſome of the gravy of the Gooſe, and a few barberies and bread crumms, and when it is boyled to a good thickneſſe, ſeaſon it with Suger and a little Cinamon, and ſo ſerve it up: ſome will add a little Muſtard and Onions unto it, and ſome will not roſt the apples, but pare them and ſlice them, and that is the neerer way, but not the better. Others will fill the belly of the Gooſe full of Onions ſhred, and Oatmeal groats, and being

ing roaſted enough, mixe it with the gravie of the Gooſe, and ſweet hearbs well boyled together, and ſeaſoned with a little Verjuyce.

A Gallantine, Sawce for a Swan.

To make a *Gall antine*, or ſauce for a Swan, Bittern, Hern, Crane, or any large Foul, take the blood of the ſame Fowl, and being ſtirred well, boyl it on the fire, then when it comes to be thick put unto it Vineger a good quantity, with a few fine white bread crummes, and ſo boyl it over again; then being come to a good thickneſs, ſeaſon it with Suger and Cynamon, ſo as it may taſte pretty and ſharp upon the Cinamon, and then ſerve it up in ſaucers as you do Muſtard, for this is called a *Chauder* or *Gallantine*, and is a ſawce almoſt for any Fowl whatſoever.

A Sawce for a Pig.

To make ſawce for a Pig, ſome take Sage and roaſt it in the belly of the Pig; then boyling Verjuyce, Butter, and Currants together, take and chop the ſage ſmall and mixing the brains of the Pig with it, put all together and ſo ſerve it up.

A ſawce for Veal.

To make ſawce for a loyn of Veal, take all kind of ſweet Pot herbs, and chopping them very ſmall with the yolks of two or three Egges, boyl them in Vineger and Butter, with a few bread crumms, and good ſtore of ſuger; then ſeaſon it with Suger and Cinamon, and a Clove or two cruſht, and ſo powre it upon the Veal, with the ſlices of Orenges and Lemmons about the Diſh

Additions unto Sawces.

Take Orenges and ſlice them thin, and put unto them White Wine and Roſe water, the powder of Mace Ginger, and Suger, and ſet the ſame upon a Chaffing diſh of coales, and when it is half boyled, put to it a good lump of butter, and then lay good ſtore of ſippets of fine white bread therein, and ſo ſerve your Chickens upon them, and trim the ſides of the diſh with Suger.

Sawce for a Turkie.

Take fair water, and ſet it over the fire; then ſlice good ſtore of Onions, and put into it, and alſo Pepper and Salt and good ſtore of the Gravy that comes from the Turky, and boyl them very well together: then put to it a few fine crummes of grated bread to thicken it, a very little Suger, and ſome Vineger, and ſo ſerve it up with the Turkey: or otherwiſe, take grated White bread and boyl it in white Wine till it be as thick as a [illegible] in boyling put in good ſtore of u-

er

gar, and Cinamon, and then with a little Turnſole make it of a high murrey colour, and ſo ſerve it in ſaucers with the Turkey, in manner of Gallantine.

The beſt Gallantine.

Take the blood of a Swan, or any other great fowle, and put it into a diſh, then take ſtewed Prunes, and put them into a ſtrainer, and ſtrain them into the blood; then ſet it on a chaffing-diſh and coales, and let it boyl; then ſtirre it till it come to be thick, and ſeaſon it very well with Suger and cinamon, and ſo ſerve it in Saucers with the fowl: but this ſauce muſt be ſerved cold.

Sawce for a Mallard.

Take good ſtore of Onions, peel them and ſlice them, and put them into Vineger and boyl them very well till they be tender; then put into it a good lump of ſweet butter, and ſeaſon it well with Suger and Cinamon, and ſo ſerve it up with the fowl.

Of Carbonadoes.

Charbonadoes, or carbonadoes which is meat broyled upon the coals (and the invention thereof was firſt brought out of *France* as appears by the name) are of divers kinds according to mens pleaſures: for there is no meat either boyled or roſted whatſoever, but may afterwards be broyled if the maſter thereof be diſpoſed; yet the general diſhes which for the moſt part are to be carbonadoed, are, a breaſt of Mutton half boyled; a ſhoulder of mutton half roſted, the legges, wings, and carkaſſes of Capon, Turkey, Gooſe, or any other fowl whatſoever, eſpecially Land fowl.

What is to be carbonadoed.

And laſtly, the uttermoſt thick skinne which covereth the ribbs of beef, and is called (being broyled,) the Inns of Court-Gooſe, and is indeed a diſh uſed moſt for wantonneſſe, ſometimes to pleaſe the appetite; to which may alſo be added the broyling of Pigs heads, or the brains of any fowl whatſoever after it is roſted and dreſt.

The manner of carbonadoing.

Now for the manner of Carbonadoing, it is in this ſort; you ſhall firſt take the meat you muſt Carbonado, and ſcotch it both above and below; then ſprinkle good ſtore of ſalt upon it, and baſte it all over with ſweet butter melted; which done, take your Broyling-iron, I do not mean a Grid-iron (though it be much uſed for this purpoſe) becauſe the ſmoak of the coals, occaſioned by the dropping of the meat, will aſcend about it, and make

make it ſtink: but a Plate iron made with hooks and pricks, on which you may hang the meat, and ſet it cloſe before the fire, and ſo the Plate heating the meat behind, as the fire doth before, it will both the ſooner and with more neatneſſe be ready: then having turned it, and baſted it till it be very brown, dredg it, and ſerve it up with vineger and butter.

Touching the toaſting of Mutton, Veniſon, or any joynt of Meat, which is the moſt excellenteſt of all Carbanadoes, you ſhall take the fatteſt and largeſt that can poſſibly be got (*for lean meat is loſſe of labour, and little meat not worth your time:*) and having ſcotcht it and caſt ſalt upon it, you ſhall ſet it on a ſtrong fork, with a dripping pan underneath it, before the face of a quick fire, yet ſo far off, that it may by no meanes ſcorch, but toaſt at leiſure; then with that which falls from it, and with no other baſting, ſee that you baſte it continually, turning it ever and anon many times and ſo oft, that it may ſoak and brown at great leiſure; and as oft as you baſte it, ſo oft ſprinkle Salt upon it; and as you ſee it toaſt, ſcotch it deeper and deeper, eſpecially in the thickeſt and moſt fleſhy parts where the blood moſt reſteth; and when you ſee that no more blood droppeth from it, but the gravy is cleer and white, then you ſhall ſerve it up either with Veniſon ſawce, with Vineger, Pepper, and Suger, Cinamon, and the juyce of an Orange mixt together, and warmed with ſome of the gravy. Of the toſting of Mutton.

Take Mutton or Lamb that hath been either roſted, or but parboyl'd, and with your Knife ſcotch it many wayes, then lay it in a deep diſh, and put to it a pint of white Wine, and a little whole Mace, a little ſliced Nutmeg, and ſome Suger, with a lump of ſweet butter, and ſtew it ſo till it be very tender; then take it forth, and brown it on the Grid-iron, and then laying ſippets in the former broth, ſerve it up. Additions, unto carbonadoes. A Raſher of Mutton or Lamb.

Take any Tongue, whether of Beef, Mutton, Calves; Red Deer or Fallow, and being well boyled peele them, cleave them, and ſcotch them many wayes; then take three or four egges broken; ſome Suger, Cinamon, and Nutmeg, and having beaten it well together, put to it a Lemmon cut in thinne ſlices, and another clean peel'd, and cut into little four ſquare bits, and then take the tongue, and How to Carbonada Tongues.

and lay it in: and then having melted good ſtore of butter in a frying pan, put the tongue and the reſt therein, and ſo frye it brown, and then diſh it, and ſcrape ſuger upon it, and ſerve it up.

Additions.

For dreſſing Fiſh

How to ſouſe any freſh fiſh.

Take any freſh fiſh whatſoever (as Pike, Bream, Carpe, Barbel, Cheam, and ſuch like,) and draw it, but ſcale it not; then take out the Liver and the refuſe, and having opened it, waſh it: then take a pottle of fair water, a pretty quantity of white Wine, good ſtore of ſalt, and ſome vinegar, with a little bunch of ſweet herbs, and ſet it on the fire: as ſoone as it begins to boyl, put in your fiſh, and having boyled a little, take it up into a faire veſſel, then put into the liquor ſome groſſe Pepper and Ginger, and when it is boyled well together with more ſalt, ſet it by to coole, and then put your Fiſh into it, and when you ſerve it up, lay Fennel thereupon.

How to boyl ſmall fiſh.

To boyl ſmall Fiſh, as Roches, Daces, Gudgeon, or Flounder, boyl White wine and water together with a bunch of choyce Herbs, and a little whole Mace, when all is boyl'd well together, put in your fiſh and ſcumme it well: then put in the foal of a *Manchet*, a good quantity of ſweet butter, and ſeaſon it with Pepper and Verjuyce, and ſo ſerve it in upon ſippets, and adorn the ſides of the diſh with Suger.

To boyl a Gurnet or Roch.

Firſt draw your Fiſh, and either ſplint it open in the backe or joynt it in the back, and truſſe it round; then waſh it cleane, and boyl it in Water and Salt, with a bunch of ſweet Herbes then take it up into a large diſh, and pour unto it Verjuyce, Nutmeg, Butter, and Pepper, and letting it ſtew a little, thicken it with the yolks of eggs: then hot remove it into another diſh, and garniſh it with ſlices of Oranges and Lemons, Barberies, Prunes, and Suger and ſo ſerve it up.

Afteer you have drawn, waſht and ſcaled a fair large Carp, ſeaſon it with Pepper, Salt, and Nutmegge, and then put it into a Coffin with good ſtore of ſweet butter, and then caſt on Raiſins of the Sun, the juyce of Lemons, and ſome ſlices of Orange-pils, and then ſprinkling on a little Vineger, cloſe up and bake it.

Firſt let your *Tench* blood in the tayle, then ſcoure it, waſh it

it, and ſcald it, then having dryed it, take the fine crummes of Bread, ſweet Creame, the yolks of Egges, Currants cleane waſht, a few ſweet hearbs, chopt ſmall, ſeaſon it with Nutmeg and Pepper, and make it into a ſtiffe paſte, and put it into the belly of the Tench, then ſeaſon the Fiſh on the out ſide with Pepper, Salt, and Nutmegge; and ſo put it into a deep Coffin with ſweet butter, and ſo cloſe up the Pye and bake it; then when it is enough draw it, and open it, and put into it a good piece of preſerved Orange mince'd: then take Vinegar, Nutmeg, Butter, Sugar, and the yolk of a new laid Egge, and boyl it on a Chafing-diſh and coals, alwayes ſtirring it to keep it from curding; then pour it into the Pye, ſhake it well, and ſo ſerve it up.

How to ſtew a Trout.

Take a large Trout fair trim'd, and waſh it, and put it into a deep pewter diſh, then take halfe a pint of ſweet Wine, with a lump of butter, and a little whole mace, Parſley, Savory, and Tyme, mince them all ſmall, and put them into the Tenches Belly, and ſo let it ſtew a quarter of an houre, then mince the yolk of a hard Egge, and ſtrow it on the Trout, and laying the hearbs about it, and ſcraping on Sugar, ſerve it up.

How to bake Eeles.

After you have drawn your Eeles, chop them into ſmall pieces of three or four inches, and ſeaſon them with Pepper, Salt, and Ginger, and ſo put them into a Coffin with a good lump of butter, great Raiſins, Onions ſmall chopt, and ſo cloſe it, bake it, and ſerve it up.

The paſtry and baked meats.

Next to theſe already rehearſed, our Engliſh Houſewife muſt be skillfull in Paſtery, and know how and in what manner to bake all ſorts of meat, and what Paſte is fit for every meat, and how to handle and compound ſuch Paſtes. As for example, Red Deer Veniſon, Wild boar, Gammons of Bacon, Swans, Elkes, Porpus, and ſuch like ſtanding diſhes, which muſt be kept long, would be bak't in a moyſt, thicke, tough, courſe, and long laſting cruſt, and therefore of all other, your Rye paſte is beſt for that purpoſe; your Turkey Capon, Pheſant, Patridge, Veale, Peacocks, Lamb, and all ſorts of Water Fowle, which are to come to the Table more than once, (yet not many dayes) would be bak't in a good

white cruſt, ſomewhat thick; therefore your wheate is fit for them; your Chickens, Calves-feet, Olives, Poratoes, Quinces, Fallow Deer, and ſuch like; which are moſt commonly eaten hot, would be in the fineſt, ſhorteſt, and thinneſt cruſt, therefore, your fine Wheat-flower, which is a little baked in the oven, before it be kneaded, is the beſt for that purpoſe.

Of the mixture of paſte.

To ſpeak then of the mixture and kneading of Paſtes, you ſhall underſtand that your Rye-paſte would be kneaded onely with hot water, and a little butter, or ſweet Seam, and Rye-flower very finely ſifted; and it would be made tough and ſtiffe, that it may ſtand well in the riſing, for the Coffin thereof muſt ever be very deep; your courſe Wheat-cruſt ſhould be kneaded with hot water, or Mutton broth, and good ſtore of butter, and the paſte made ſtiffe and tough, becauſe that Coffin muſt be deep alſo: your fine Wheat cruſt muſt be kneaded with as much butter as water, and the paſte made reaſonable light and gentle, into which you muſt put three or four egges or more, according to the quantity you blend together, for they will give it a ſufficient ſtiffening.

Of puffe paſt.

Now for the making of puff paſt of the beſt kind, you ſhall take the fineſt wheat flower after it hath been a little bake in a pot in the oven, and blend it well with egges, whites and yolkes all together, and after the paſte is well kneaded, roule out a part thereof as thin as you pleaſe, and then ſpread cold ſweet butter over the ſame, then upon the ſame butter role another leaf of the paſte as before; and ſpread it with butter alſo, and thus role leaf upon leaf with butter between, till it be as thick as you think good: and with it either cover any bak't meate, or make paſte for Veniſon, Florentine, Tart, or what diſh elſe you pleaſe, and ſo bake it: there be ſome that to this paſte uſe ſugar, but it is certaine, it will hinder the riſing thereof, and therefore, when your puff paſt is bak't, you ſhall diſſolve Sugar into Roſe-water, and drop it into the paſte as much as it will by any means receive, and then ſet it a little while in the Oven after, and it will be ſweet enough.

Of baking red Deer, or Fallow, or any thing to keep cold.

When you bake red Deer, you ſhall firſt parboyl it, and take out the bones, then you ſhall, if it be lean, lard it, if fat, ſave the charge: then put it into a preſſe to ſqueeſe out the blood;

then

then for a night lay it in a meat ſauce made of Vinegar, ſmall drink and ſalt; and then taking it forth, ſeaſon it well with Pepper finely beaten, and ſalt well mixt together, and ſee that you lay good ſtore thereof, both upon and in every open and hollow place of the Veniſon, but by no means cut any ſlaſhes to put in the Pepper, for it will of it ſelf ſink faſt enough into the fleſh, and be more pleaſant in the eating. Then having raiſed the Coffin, lay in the bottom a thick courſe of butter, then lay the fleſh thereon, and cover it all over with butter, and ſo bake it as much as if you did bake brown bread, then when you draw it, melt more butter with three or foure ſpoonfuls of Vinegar, and twice ſo much Claret Wine, and at a vent hole on the Toppe of the lidde, poure in the ſame, till it can receive no more, and ſo let it ſtand and coole, and in this ſort, you may bake Fallow Deer, or Swanne, or whatſoever elſe you pleaſe to keep cold, the meate ſauce onely being left out, which is onely proper to Red Deer. And if to your meat ſauce, you adde a little Turneſole, and therein ſteep Beef, and Ramme mutton: you may alſo in the ſame manner take the firſt for Red Deer Veniſon, and the latter for Fallow, and a very good judgement ſhall not be able to ſay otherwiſe, then that it is of it ſelfe perfect Veniſon, both in Taſte, Colour, and the manner of cutting. To bake beef or mutton for Veniſon.

To bak: an excellent Cuſtard or Dowſet: you ſhall take good ſtore of egges, and putting away one quarter of the whites, beat them exceeding well in a baſon, and then mixe with them the ſweeteſt and thickeſt cream you can get, for if it be any thing thinne, the Cuſtard will be wheyiſh: then ſeaſon it with ſalt, ſugar, cinamon, cloves, mace, and a little Nutmeg, which done, raiſe your coffins of good Tough, wheat paſte, being the ſecond ſort before ſpoken of, and if you pleaſe raiſe it in pretty works or angular formes, which you may do by fixing the upper part of the cruſt to the nether with the yolks of egges; then when the coffins are ready, ſtrow the bottomes over a good thickneſſe with currants and ſugar, then ſet them into the Oven, and fill them up with the confection before blended, and ſo drawing them, adorne all the Tops with carraway Cumfets, and ſlices of Date pickt right up, and ſo To bake a Cuſtard or Dowſet.

ſerve them up to the Table. To prevent the wheyiſhneſſe of the Cuſtard, diſſolve into the firſt confection a little Iſing-glaſſe and all will be firm.

To bake an Olive-pye.

To make an excellent olive Pye: take ſweet hearbs, as Violet leaves, Strawberry leaves, Spinage, Succory, Endive, Tyme and Sorrel, and chop them as ſmall as may be, and if there be a Scallion or two amongſt them it will give the better taſte, then take the yolks of hard Eggs, with Currants, Cinamon, Clove, and Mace, and chop them among the hearbs alſo; then having cut out long Olives of a leg of Veal, roule up more than three parts of the hearbs ſo mixed within the Olives, together with a good deal of ſweet butter; then having raiſed your cruſt of the fineſt and beſt paſte, ſtrow in the bottom the remainder of the hearbs, with a few great Raiſins, haying the ſtones pickt out, then put in the Olives, and cover them with great Raiſins, and a frew Prunes: then over all lay good ſtore of butter, and ſo bake them, then being ſufficiently bak't, take Claret Wine, Sugar, Cinamon, and two or three ſpoonfuls of Wine Vinegar, and boyl them together, and then drawing the Pye, at a vent in the Top of the lid, put in the ſame, and then ſet it into the Oven again a little ſpace, and ſo ſerve it forth.

To bake a Marrow-bone pye.

To bake the beſt Marrow-bone-pye, after you have mixt the cruſts of the beſt ſort of paſts, and raiſed the coffin in ſuch a manner as you pleaſe; you ſhall firſt in the bottome thereof, lay a courſe of marrow of Beefe, mixt with Currants: then upon it a lay of the ſoales of Artichocks, after they have been boyled, and are divided from the Thiſtle; then cover them over with marrow, Currants, and great Raiſins, the ſtones pickt out; then lay a courſe of Potatoes cut in thick ſlices, after they have been boyled ſoft, and are clean pil'd; then cover them with Marrow, Currants, great Raiſins, Sugar, and Cinamon, then lay a layer of candied Eringo roots mixt very thick with the ſlices of Dates; then cover it with Marrow, Currants, great Raiſins, Sugar, Cinamon, and Dates, with a few Damask prunes, and ſo bake it: and after it is bak't powre into it, as long as it will receive it, White Wine, Roſe-water, Sugar, Cinamon, and Vinegar mixt together, and candy all

all the cover with Roſe-water and Sugar only, and ſo ſet it into the Oven a little, and ſerve it forth.

To bake a Chicken pye, after you have truſt your Chickens, then broken their legges and breſt bones, and raiſed your cruſt of the beſt paſte, you ſhall lay them in the coffin cloſe together, with their bodyes full of butter: then lay upon them, and underneath them Currants, great Raiſins, Prunes, Cinamon, Sugar, whole Mace, and Salt: then cover all with great ſtore of Butter, and ſo bake it: after pour into it the ſame liquor you did in your Marrow-bone pye, with yolkes of two or three Egges beaten amongſt it, and ſo ſerve it forth. To bake a chicken pye.

To make good Red Deer Veniſon of Hares, take a Hare or two or three, as you can or pleaſe, and pick all the fleſh from the bones; then put it into a mortar, either of wood or ſtone, and with a wooden peſtle let a ſtrong perſon beat it exceedingly, and ever as it is beaten, let one ſprinkle in ſome Vinegar, and ſome Salt: then when it is ſufficiently beaten, take it out of the mortar, and put it into boyling water, and parboyl it: when it is parboyl'd, take it and lay it on a Table in a round lump, and lay a board over it: and with weights preſs it as hard as may be: then the water being preſt out of it, ſeaſon it well with Pepper and Salt: then lard it with the fat of Bacon ſo thick as may be, then bake it as you bake other Red Deer, which is formerly declared. Additions to the paſtry Veniſon or hares.

Take a Hare and pick off all the fleſh from the bones, and only reſerve the head, then parboyl it well: which done, take it out and let it cool, aſſoon as it is cold, take at leaſt a pound and half of Raiſins of the Sunne, and take out the ſtones, then mixe them with a good quantity of Mutton ſuet, and with a ſharp ſhredding-knife ſhred it as ſmall as you would doe for a Chewet; then put to it Currants, and whole Rayſins, Cloves and Mace, Cinamon and Salt: then having raiſed the Coffin long-wiſe to the proportion of a Hare, firſt lay in the head, and then the aforeſaid meat, and lay the meat in the true proportion of a Hare, with neck, ſhoulders, and legges, and then cover the coffin, and bake it as other bak't meates of that nature. To bake a hare pye.

A Gammon of Bacon pie.

Take a Gammon of Bacon, and onely waſh it cleane, and then boyl it on a ſoft gentle fire, till it be boyl'd as tender as is poſſible, ever and anon ſkeeting it clean, that by all meanes it may boyl white: then take off the ſword, and farſe it very well with all manner of ſweet and pleaſant farſing herbs, then ſtrow ſtore of Pepper over it, and prick it thick with cloves; then lay it into a coffin made of the ſame proportion, and lay good ſtore of Butter round about it, and upon it, and ſtrow Pepper upon the Butter, that as it melts, the Pepper may fall upon the Bacon; then cover it, and make the proportion of a Pigs Head in paſte upon it, and then bake it as you make red deer, or things of the like nature, only the Paſte would be of Wheat-meal.

A Herring py.

Take white pickled Herrings of one nights watering, and boyl them a little, then take off the skin, and take onely the backs of them, and pick the fiſh clean from the bones; then take good ſtore of Raiſins of the Sun, and ſtone them; and put them to the fiſh; then take a Warden or two, and pare it, and ſlice it in ſmall ſlices from the core, and put it likewiſe to the fiſh; then with a very ſharp ſhredding knife ſhred all as ſmall and fine as may be: then put to it good ſtore of Currants, Sugar, Cinamon, ſlic't Dates, and ſo put it into the coffin, with good ſtore of very ſweet Butter, and ſo cover it, and leave onely a round vent-hole on the Top of the lid, and ſo bake it like pies of that nature: When it is ſufficiently bak't, draw it out, and take Claret Wine, and a little Verjuyce, Sugar, Cinamon, and ſweet Butter, and boyl them together: then put it in at the vent-hole, and ſhake the pye a little, and put it againe into the Oven for a little ſpace, and ſo ſerve it up, the lid being candied over with Sugar, and the ſides of the diſh trimmed with Sugar.

A Ling pie.

Take the jole of the beſt Ling, that is not much watered, and is well ſodden and cold; but whilſt it is hot, take off the skin, and pare it clean underneath, and pick out the bones clean from the fiſh: then cut it into groſſe bits, and let it lye; then take the yolks of a dozen Eggs boild exceeding hard, and put them to the Fiſh and ſhred all together as ſmall as is poſſible, then take all manner of the beſt and fineſt pot-herbs, and chop them wonderfull ſmall

ſmall, and mix them alſo with the fiſh, then ſeaſon it with Pepper, Cloves, and Mace, and ſo lay it into a coffin with great ſtore of ſweet butter, ſo as it may ſwim therein, and then cover it, and leave a vent-hole open in the Top, and when it is baked, draw it, and take Verjuyce, ſugar, cinamon, and butter, and boyl them together; and firſt with a feather annoint all the lid over with that liquor, and then ſcrape good ſtore of ſugar upon it; then pour the reſt of the liquor in at the vent-hole, and then ſet it into the Oven again for a very little ſpace, and then ſerve it up as pyes of the ſame nature, and both theſe pyes of Fiſh before rehearſed, are extraordinary and ſpeciall Lenten diſhes.

Take a pint of the ſweeteſt and thickeſt creame that can be gotten, and ſet it on the fire in a very clean ſcowred skillet, and put into it Sugar, Cinamon, and a Nutmegge cut into four quarters, and ſo boyl it well: then take the yolkes of foure Egges, and take off the ſlimes, and beat them well with a little ſweet Cream, then take the foure quarters of the Nutmeg out of the creame, then put in the egges, and ſtirre it exceedingly till it be thick: then take a fine Manchet, and cut it into thinne ſhivers, as much as will cover a diſh bottom, and holding it in your hand, pour half the Creame into the diſh: then lay your bread over it, and cover the bread with the reſt of the creame, and ſo let it ſtand till it be cold: then ſtrew it over with Caraway comfets, and prick up ſome Cinamon comfets, and ſome ſlic't Dates; or for want thereof, ſcrape all over it ſome Sugar, and trim the ſides of the diſh with Sugar, and ſo ſerve it up.

Take a pint of the beſt and thickeſt Creame, and ſet it on the fire in a cleane skillet, and put into it Sugar, Cinamon, and a Nutmegge cut into four quarters, and ſo boyl it well, then put it into the diſh you intend to ſerve it in, and let it ſtand ſo cool till it be more than luke-warme: then put in a ſpoonfull of the beſt earning, and ſtir it well about, and ſo let it ſtand till it be cold: and then ſtrew Sugar upon it, and ſo ſerve it up, and this you may ſerve either in diſh, glaſſe, or other plate.

Take Calves feet well boyl'd, and pick all the meat from the bones: then being cold, ſhred it as ſmall as you can; then pye. A calves foot

ſeaſon it with Cloves and Mace, and put in good ſtore of Currants, Raiſins, and Prunes, then put it into the coffin with good ſtore of ſweet Butter: then break in whole ſticks of Cinamon, and a Nutmegge ſlic't into four quarters, and ſeaſon it before with Salt: then cloſe up the coffin, and onely leave a vent-hole; When it is bak't, draw it, and at the vent-hole put in the ſame liquor you put in the Ling-pye, and trim the lid after the ſame manner, and ſo ſerve it up.

Oyſter pye. Take of the greateſt Oyſters drawn from the ſhels, and parboyl them in Verjuyce: then put them into a Cullander, and let all the moyſture run from them, till they be as dry as poſſible: then raiſe up the coffin of the pye, and lay them in; then put to them good ſtore of currants, and fine powdred Sugar, with whole Mace, whole Cloves, whole Cinamon, and Nutmegge ſlic'd, Dates cut, and good ſtore of ſweet butter: then cover it, and onely leave a vent-hole: when it is bak't, then draw it, and take White Wine, and white wine Vineger, Sugar, Cinamon, and ſweet butter, and melt it together: then firſt trim the lid therewith, and candy it with Sugar; then powre the reſt in at the vent hole, and ſhake it well, and ſo ſet it into the Oven again for a little ſpace, and ſo ſerve it up, the diſh edges trim'd with Sugar. Now ſome uſe to put to this Pye Onions ſliced and ſhred, but that is referred to diſcretion, and to the pleaſure of the Taſt.

To recover Veniſon that is tainted. Take ſtrong Ale, and put to it wine Vinegar as much as will make it ſharp; then ſet it on the fire, and boyl it well and skum it, and make of it a ſtrong brine with bay ſalt or other ſalt; then take it off, and let it ſtand till it be cold, then put your Veniſon into it, and let it lye in it full twelve houres: then take it out from that meer ſawce, and preſſe it well, then parboyl it, and ſeaſon it with Pepper, and Salt, and bake it, as hath been before ſhewed in this Chapter.

A chewet pye. Take the brawns and the wings of Capons and Chickens after they have been roaſted, and pull away the skin; then ſhred them with Mutton-ſuet very ſmall; then ſeaſon it with Cloves, Mace, Cynamon, Sugar, and Salt: then put to Raiſins of the Sun, and Currants, and ſlic'd Dates, and Orenge-pills, and being well mixt together, put it into ſmall coffins made for

for the purpoſe, and ſtrow on the Top of them good ſtore of Carraway comfets: then cover them, and bake them with a gentle heat: and theſe Chewets you may alſo make of roaſted Veal, ſeaſoned as before ſhewed, and of all parts the loyn is the beſt.

Take a Legge of Mutton, and cut the beſt of the fleſh from the bone, and parboyl it well: then put to it three pound of the beſt Mutton ſuet, and ſhred it very ſmall; then ſpread it abroad, and ſeaſon it with Salt, Cloves, and Mace: then put in good ſtore of Currants, great Raiſins and Prunes clean waſhed, and picked, a few Dates ſliced, and ſome Orenge-pills ſliced; then being all well mixt together, put it into a coffin, or into divers coffins, and ſo bake them: and when they are ſerved up, open the lids, and ſtrow ſtore of Sugar on the Top of the meat, and upon the lid. And in this ſort, you may alſo bake Beef or Veal, onely the Beef would not be parboyl'd, and the Veal will aske a double quantity of Suet. A mince pie.

Take the faireſt and beſt Pippins, and pare them, and make a hole in the Top of them; then prick in each hole a Clove or two, then put them into the coffin, then break in whole ſticks of Cynamon, and ſlices of Orenge-pills, and Dates, and on the Top of every Pippin, a little piece of ſweet Butter; then fill the coffin, and cover the Pippins over with Sugar: then cloſe up the Pye, and bake it, as you bake Pyes of the like nature: and when it is bak'd, annoint the lidde over with ſtore of ſweet butter, and then ſtrow Sugar upon it a good thickneſſe, and ſet it into the Oven again for a little ſpace, as while the meat is in diſhing up, and then ſerve it. A Pippin pie.

Take of the faireſt and beſt Wardens, and pare them, and take out the hard cores on the Top, and cut the ſharp ends at the bottom flat; then boyle them in white Wine and Sugar, untill the ſirrup grow thick: then take the Wardens from the ſirrup in a cleare diſh, and let them cool, then ſet them into the coffin, and prick cloves in the Tops, with whole ſticks of Cinamon, and great ſtore of Sugar as for Pippins: then cover it, and onely reſerve a vent-hole, ſo ſet it in the Oven and bake it; when it is bak'd, draw it forth, and take the firſt ſirrup in which. A warden pie.

which the Wardens were boyld, and taſte it, and if it be not ſweet enough, then put in more Sugar, and ſome Roſe-water, and boyl it againe a little: then pour it in at the vent-hole, and ſhake the pye well: then take ſweet Butter, and Roſe-water melted, and with it annoint the pye-lid all over, and then ſtrow on it ſtore of Sugar, and ſo ſet it into the Oven again a little ſpace, and then ſerve it up: and in this manner you may alſo bake Quinces.

To preſerve Quinces to bake all the year.

Take the beſt and ſweeteſt Wort, and put to it good ſtore of Sugar: then pare and cover the Quinces clean, and put them therein, and boyl them till they grow tender: then take out the quinces and let them cool, and let the pickle in which they were boyled ſtand to coole alſo: then ſtraine it thorow a ſtrainge or ſieve, then put the Quinces into a ſweet earthen pot: then powr the pickle or ſirrop unto them, ſo as all the Quinces may be quite covered all over: then ſtop up the pot cloſe, and ſet it in a dry place, and once in ſix or ſeven weekes look upon it; and if you ſee it ſhrink, or do begin to hoar or mould, then powr out the pickle or ſirrop, and renewing it, boyl it over again, and as before put it to the Quinces being cold, and thus you may preſerve them for the uſe of baking, or otherwiſe, all the year.

A Pippin tart.

Take Pippins of the faireſt, and pare them, and then divide them juſt in halfes, and take out the cores cleane: then having rould the coffin flat, and raiſed up a ſmall verdge of an inch, or more high, lay in the Pippins with the hollow ſide downward, as cloſe one to another as may be: then lay here and there a Clove, and here and there a whole ſticke of Cinamon, and a little bit of Butter: then cover all clean over with Sugar, and ſo cover the coffin, and bake it according to the manner of Tarts, and when it is bak't, then draw it out, and having boyled butter and Roſe-water together, annoint all the lid over therewith, and then ſcrape or ſtrow on it good ſtore of Sugar, and ſo ſet it in the oven again, and after ſerve it up.

A Codlin tart.

Take green Apples from the Tree, and coddle them in ſcalding water without breaking: then pill the thin skinne from them and ſo divide them in halfs, and cut out the cores, and ſo

lay

lay them into the coffin; and do in every thing as you did in the Pippin Tart; and before you cover it, when the Sugar is caſt in, ſee you ſprinkle upon it good ſtore of Roſe-water, then cloſe it, and do as before ſhewed.

Take Codlins as before ſaid, and pill them and divide them in halfes, and core them, and lay a lear thereof in the bottom of the pye: then ſcatter here and there a clove, and here and there a piece of whole Cinamon, then cover them all over with Sugar, then lay another lear of Codlings, and do as before ſaid, and ſo another; till the coffin be all filled; then cover all with Sugar, and here and there a Clove and a Cinamon-ſtick, and if you will a ſlic't Orange pill and a Date; then cover it, and bake it as the Pies of that nature: When it is bak't, draw it out of the Oven, and take of the thickeſt and beſt Cream, with good ſtore of Sugar, and give it one boyl or two on the fire, then open the pye, and put the Cream therein, and maſh the Codlins all about; then cover it, and having trimm'd the lid, (as was before ſhewed in the like Pies and Tarts) ſet it into the Oven again for half an hour, and ſo ſerve it forth. A codlin Pie.

Take the faireſt Cherries you can get, and pick them clean from leaves and ſtalks: then ſpread out your coffin as for your Pippin Tart, and cover the bottom with ſugar, then cover the ſugar all over with Cherries, then cover thoſe Cherries with ſugar, ſome ſticks of Cinamon, and here and there a Clove; then lay in more Cherries, and ſo more ſugar, Cinamon and Cloves, till the coffin be filled up: then cover it, and bake it in all points, as the codlin and pippin Tart, and ſo ſerve it: and in the ſame manner you may make Tarts of Gooſeberries, Strawberries, Rasberries, Bilberries, or any other Berry whatſoever. A cherry tart.

Take Rice that is clean pick'd, and boyl it in ſweet Cream, till it be very ſoft; then let it ſtand and cool, and put into it ſtood ſtore of Cinamon and Sugar, and the yolks of a couple of Eggs and ſome Currants, ſtir and beat all well together, then having made the coffin in the manner before-ſaid for other Tarts, put the Rice therein, and ſpread it all over the coffin: then break many little bits of ſweet Butter upon it all over, and ſcrape ſome Sugar over it alſo; then cover the Tart, and bake it, and trim it in all points as hath been before ſhewed, and ſo ſerve it up. A Rice Tart.

Take

A Florentine. Take the Kidneys of Veal after it hath been well roaſted, and is cold: then ſhred it as fine as is poſſible; then take all ſorts of ſweet Pot herbs, or farcing herbs, which have no bitter or ſtrong taſt, and chop them as ſmall as may be, and putting the Veal into a large diſh put the herbs unto it, and good ſtore of clean waſht Currants, Sugar, Cinamon, the yolkes of foure egges, a little ſweet Creame warm'd, and the fine grated crummes of a half penny loafe, and ſalt, and mixe all exceedingly together: then take a deep pewter diſh, and in it lay your paſte very thin rowled out, which paſte you muſt mingle thus: Take of the fineſt Wheat flower a quart, and a quarter ſo much Sugar, and a little Cinamon; then breake into it a couple of Egges, then take ſweet cream and butter melted on the fire, and with it knead the paſte, and as was before ſaid, having ſpread butter all about the diſhes ſides, then put in the Veal, and breake pieces of ſweet butter upon it, and ſcrape Sugar over it; then rowl out another paſte reaſonable thicke, and with it cover the diſh all over, cloſing the two paſtes with the beaten whites of Egges very faſt together, then with your knife cut the lid into diverſe pretty workes, according to your fancy then ſet it in the Oven and bake it with Pyes and Tarts of like nature; when it is bak't, draw it and trimme the lid with ſugar, as hath been ſhewed in Tarts, and ſo ſerve it up with your ſecond courſe.

A prune tart. Take of the faireſt damask Prunes you can get, and put them in a clean pipkin with fair Water, Sugar, unbruiſed Cinamon, and a branch or two of Roſemary, and if you have bread to bake, ſtew them in the Oven with your bread: if otherwiſe, ſtew them on the fire: when they are ſtewed, then bruiſe them all to maſh in their ſirrup, and ſtrain them into a clean diſh; then boyl it over againe with Sugar, Cinamon, and Roſe-water, till it be as thick as marmelad: then ſet it to cool, then make a reaſonable Tough paſte with fine flower, Water, and a little butter, and rowl it out very thin: then having patterns of paper cut into divers proportions, as Beaſts, Birds, Armes Knots, Flowers and ſuch like, Lay the patterns on the paſt, and ſo cut them accordingly: then with your fingers pinch up the edges of the paſte, and ſet the work in good

good proportion: then prick it well all over for riſing, and ſet it on a clean ſheet of large paper, and ſo ſet it into the Oven, and bake it hard; then draw it and ſet it by to coole; and thus you may do by a whole Oven full at one time, as your occaſion of experience is: then againſt the time of ſervice comes, take of the confection of Prunes before rehearſed, and with your Knife or a ſpoon, fill the coffin according to the thickneſſe of the verge, then ſtrow it over with carraway cumfets, and prick long cumfets upright in it, and ſo taking the paper from the bottom, ſerve it on a plate in a diſh or charger, according to the bigneſſe of the Tart, and at the ſecond courſe; and this Tart carryeth the colour black.

Take Apples and pare them, and ſlice them thin from the core into a Pipkin with White Wind, good ſtore of Sugar, Cinamon, a few Saunders and Roſe-water, and ſo boyl it till it be thick: then cool it and ſtrain it and beat it very well together with a ſpoon, then put in into the coffin as you did the Pruen Tart, and adorn it alſo in the ſame manner, and this Tart you may fill thicker or thinner, as you pleaſe to raiſe the edge of the coffin, and it carrieth colour red. Apple-Tart.

Take good ſtore of Spinage, and boyl it in a Pipkin, with White-Wine, till it be very ſoft as pap: then take it and ſtrain it well into a pewter diſh, not leaving any part unſtrained: then put to it Roſe-water, great ſtore of Sugar and cinamon, and boyl it till it be as thick as Marmalad, then let it coole, and after fill your Coffin and adorn it, and ſerve it in all points as you did your Pruen-Tart; and this carrieth the colour green. A Spinnage Tart.

Take the yolks of Egges and break away the films, and beat them well with a little Cream, then take of the ſweeteſt and thickeſt cream that can be got, and ſet it on the fire in a clean skillet, and put into it Sugar, Cinamon, Roſe-water, and then boyl it well: when it is boyld, and ſtill boyling, ſtir it well, and as you ſtir it put egges, and ſo boyl it till it curdle: then take it from the fire and put it into a ſtrainer, and firſt let the thin whey run away into a by diſh, then ſtrain A yellow tart.

ſtrain the reſt very well, and beat it well with a ſpoon, and ſo put it into the Tart Coffin, and adorn it as you do your Pruin Tart, and ſo ſerve it, and this carrieth the colour yellow.

A white Tart. Take the whites of egges and beat them with Roſe-water, and a little ſweet cream, then ſet on the fire good thick ſweet cream, and put into it ſugar, cinamon, roſe-water, and boyl it well, and as it boyles ſtirr it exceedingly, and in the ſtirring put in the whites of eggs, then boyl it till it curde, and after do in all things as you did to the yellow Tart; and this carrieth the colour white, and it is a very pure white, and therefore would be adorned with Red carraway Comfets, and as this, ſo with blaunched almonds like white Tarts, and full as pure. Now you may if you pleaſe, put all theſe ſeverall colours, and ſeverall ſtuffes into one Tart, as thus; If the Tart be in the proportion of a beaſt, the body may be of one colour, the eyes of another, the Teeth of another, the Tallents of another: and of birds, the body of one colour, the eyes of another, the legs of another, and every feather in the wings of a ſeverall colour, according to fancy: and ſo likewiſe in Armes, the field one colour, the charge of another, according to the form of the Coat armour; as for Mantles, Trails, and devices about arms, they may be ſet out with ſeverall colours of preſerves, conſerves, marmalads and good in cakes, and as you ſhall find occaſion or invention; and ſo likewiſe of knots, one tayl of one colour, and another of another, and ſo of as many as you pleaſe.

A hearb Tart. Take Sorrell, Spinage, Parſly, and boyl them in water till they be very ſoft as pap, then take them up and preſſe the water clean from them, then take good ſtore of yolks of egges boild very hard, and chopping them with the hearbs exceeding ſmall, then put in good ſtord of currants, ſugar, and cynamon, and ſtir all well together; then put them into a deep Tart Coffin with good ſtore of ſweet butter, and cover it and bake it like a Pippin Tart, and adorn the lid after the baking in that manner alſo, and ſo ſerve it up.

To bake a pudding pye. Take a quart of the beſt cream, and ſet it on the fire, and ſlice a loaf of the lighteſt white bread into thin ſlices, and put into it, and let it ſtand on the fire till the milk begin to riſe; then

then take it off, and put it into a baſon, and let it ſtand till it be cold, then put in the yolks of four eggs, and two whites, good ſtore of currants, ſugar, Cinamon, Cloves, Mace, and plenty of Sheeps ſuet finely ſhred, and a good ſeaſon of Salt, then trime your pot very well round about with butter, and ſo put in your pudding, and bake it ſufficiently, then when you ſerve it, ſtrow Sugar upon it.

A white-pot.

Take the beſt and ſweeteſt cream; and boyl it with good ſtore of Sugar, and Cinamon, and a little Roſe-water, then take it from the fire and put it into clean pickt Rice, but not ſo much as to make it thick, and let it ſteep therein till it be cold, then put in the yolks of ſix egges and two whites, Currants, Cinamon, Sugar, and Roſe-water, and ſalt, then put it into a pan or pot as thin as it were a cuſtard; and ſo bake it, and ſerve it in the pot it is baked in, trimming the top with Sugar or Comfets.

Banquetting fruit and conceited diſhes.

There are a World of other bakt Meats and Pies, but for as much as whoſoever can doe theſe, may doe all the reſt, becauſe herein is contained all the art of ſeaſonings, I will trouble you with no further repetitions; but proceed to the manner of making Banquetting ſtuff, and conceited diſhes, with other pretty and curious ſecrets, neceſſary for the underſtanding of our Engliſh Houſe-wife: for albeit, they are not of generall uſe, yet in their due times, they are ſo needfull for adornation, that whoſoever is ignorant therein, is lame, and but the halfe part of a Houſe-wife.

To make paſt for Quinces.

To make paſt of quinces, firſt boyl your quinces whole, and when they are ſoft pare them, and cut the quince from the core; then take the fineſt Sugar you can get, finely beaten and ſearſed, and put in a little Roſe-water, and boyl it together till it be ſtiffe enough to mould, and when it is cold, then role it: and print it: a pound of quinces will take a pound of Sugar, or near thereabouts.

To make thin quince cakes.

To make thinne quince cakes, take your quince when it is boyled ſoft as before ſaid, and dry it upon a pewter plate, with a ſoft heat, and be ever ſtirring of it with a ſlice till it be hard, then take ſearſed ſugar quantity for quantity, and ſtrow it into the quince, as you beat it in a wooden or ſtone morter: and ſo roule them thin and print them.

To

To preſerve quinces.

To preſerve quinces, firſt pare your quinces, and take out the cores, and boyl the cores and parings altogether in fair water, and when they begin to be ſoft, take them out and ſtrain your liquor, and put the weight of your quinces in Sugar, and boyl the quinces in the ſirrop till they be tender: then take them up and boil the ſirrup till it be thick. If you will have your quinces red, cover them in the boyling; and if you will have them white do not cover them.

To make Ipocras.

To make Ipocras, take a pottle of wine, two ounces of good cinamon, half an ounce of ginger, nine cloves, and ſix pepper corns, and a nutmeg, and bruiſe them and put them into the wine with ſome Roſemary flowers, and ſo let them ſteep all night, and then put in Sugar a pound at leaſt, and when it is well ſetled, let it run through a wollen bag made for that purpoſe: thus if your Wine be claret, the Ipocras will be red; if white, then of that colour alſo.

To make jelly.

To make the beſt jelly, take Calves feet and waſh them, and ſcald off the hair as clean as you can get it: then ſplit them and take out the fat and lay them in water and ſhift them, then bruiſe them in fair water untill it will jelly, which you ſhall know by now and then cooling a ſpoonfull of the broth; when it will jelly, then ſtrain it, and when it is cold, then put in a pint of Sack and whole Cinamon, and Sugar and a little Roſe-water, and boyl all well together again. Then beat the white of an Egge and put into it, and let it have one boyl more: then put in a branch of Roſemary into the bottom of your jelly bag, and let it run through once or twice, and if you will have it coloured, then put in a little Townſall. Alſo if you want calves feet, you may make as good Jelly if you take the like, quantity of Iſinglaſſe, and ſo uſe no calves feet at all.

To make Leach.

To make the beſt Leech take Iſingglaſſe, and lay it two hours in water, and ſhift it and boyl it in fair water, and let it cool, Then take Almonds and lay them in cold water till they will blaunch; and then ſtamp them and put to new milk, and ſtrain them and put in whole Mace and Ginger ſlic't, and boyl them till it taſte well of the ſpice: then put in your Iſingglaſs and ſugar, and a little Roſe-water, and then let them all run through a ſtrainer.

To make ginger bread.

Take Claret Wine, and colour it with Townſall, and put in ſugar

ſuger, and ſet it to the fire ; then take wheat bread finely grated and ſifted, and Lycoras, Anniſeeds, Ginger and Cinamon beaten very ſmall and ſearſed ; and put your bread and your ſpice together, and put them into the wine and boyl it, and ſtir it till it be thick, then mould it and print it at your pleaſure, and let it ſtand neither too moiſt nor too warm.

Marmalade of Quinces, red.

To make red Marmalade of quinces, take a pound of Quinces and cut them in halfes, and take out the cores, and pare them; then take a pound of Suger, and a quart of fair water, and put them all into a pan, and let them boyl with a ſoft fire, and ſometimes turn them and keep them covered with a pewter diſh, ſo that the ſteam or ayr may come a little out : the longer they are in boyling, the better colour they will have : and when they be ſoft take a Knife, and cut them croſs upon the top, it will make the ſirrop go through that they may be all of the like colour : then ſet a little of your ſirrop to cool, and when it beginneth to be thick, then break your quinces with a ſlice or a ſpoon, ſo ſmall as you can in the pan, and then ſtrow a little fine ſuger in your boxes bottome, and ſo put it up.

Marmalade white.

To make white Marmalade, you muſt in all points uſe your quinces as is before ſaid ; only you muſt take but a pint of water to a pound of quinces, and a pound of Suger, and boyl them as faſt as you can, and cover them not at all.

To make jumbals.

To make the beſt Jumbals, take the whites of three Eggs, and beat them well, and take off the froth ; then take a little milke and a pound of fine wheat flowre and ſuger together finely ſifted, and a few Anniſeeds well rub'd and dryed, and then work all together as ſtiff as you can work it, and ſo make them in what forms you pleaſe, and bake them in a ſoft oven upon white papers.

To make biſket bread.

To make Biſket bread, take a pound of fine flowre, and a pound of ſuger finely beaten and ſearſed, and mixe them together, then take eight eggs, & put four yolks, and beat them very wel together ; then ſtrow in your flowr & ſuger as you are beating of it, by a little at once, it will take very near an hours beating : then take halfe an ounce of Anniſeeds and Coriander ſeeds, and let them be dryed and rub'd very clean, and put them in ; then rub your biskes pans with cold ſweet butter as thin as you can, and ſo put it in, and bake it an Oven : but if you would

have thinne cakes, then take fruit dishes, and rub them in like sort with butter, and so bake your Cakes on them, and when they are almost baked, turn them, and thrust them down close with your hand. Some to this Bisket bread will adde a little Cream, and it is not amisse, but excellent good also.

To make finer jumbals. To make Jumbals more fine and curious than the former, and neerer to the taste of the Macoroon, take a pound of Suger, beat it fine, then take as much fine wheat flowre, and mixe them together, then take two whites and one yolk of an Egge, half a quarter of a pound of blanched Almonds: then beat them very fine altogether, with half a dish of sweet butter, and a spoonfull of Rose water, and so work it with a little Cream till it come to a very stiff paste, then roul them forth as you please: and hereto you shall also, if you please, adde a few dryed Annifeeds finely rubbed, and strewed into the paste, and also Coriander seeds.

To make dry Suger-leach. To make dry Suger leach, blaunch your Almonds, and beat them with a little Rose water, and the white of one egge, and you must beat it with a great deal of Suger, and work it as you would work a piece of past: then roul it, and print it as you did other things, only be sure to strew Suger in the print for fear of cleaving to.

To make leach Lumbard. To make Leach Lumbard, take half a pound of blaunched Almonds, two ounces of Cinamon beaten and searsed, halfe a pound of Suger; then beat your Almonds, and strew in your Suger and Cinamon till it come to a paste, then roul it, and print it, as aforesaid.

To make fresh Cheese. To make an Excellent fresh Cheese, take a pottle of milk as it comes from the Cow, and a pint of Cream: then take a spoonfull of Runnet or Earning, and put it unto it, and let it stand two hours; then stirre it up, and put it into a fine cloth, and let the Whey drain from it: then put it into a bowl, and take the yolk of an Egge, a spoonfull of Rose water, & bray them together with a very little Salt, with Suger & Nutmeggs, & when all these are brayed together, & seasht, mixe it with the curd, & then put it in the Cheese fat with a very fine cloth.

How to make coorse Ginger-bread. To make coorse Ginger bread, take a quart of honey, and set it on the coals and refine it: then take a penny worth of Ginger,

Ginger, as much Pepper, as much Lycoras and a quarter of pound of Anniſeeds, and a penny worth of Saunders: all theſe muſt be beaten and ſearſed, and ſo put into the Hony; then put in a quarter of a pint of Claret wine, or old Ale: then take three penny manchets finely grated, and ſtrow it amongſt the reſt, and ſtir it till it come to a ſtiff paſte, and then make it into cakes, and dry them gently.

How to make Quince cakes ordinary.

To make ordinary Quince cakes, take a good piece of a preſerved quince, and beat it in a morter, and work it up into a very ſtiff paſte with fine ſearſt ſuger; then print it, and dry them gently.

How to make Cinamon ſticks.

To make moſt artificial Cinamon ſticks, take an ounce of Cinamon and pound it, and half a pound of Suger: then take ſome gum Dragon, and put it in ſteep in Roſe water: then take thereof to the quantity of a Hazel nut, and work it out and print it, and roul it in form of a Cinamon ſtick.

How to make Cinamon water.

To make Cinamon water, take a pottle of the beſt Ale and a pottle of Sack-lees, a pound of Cinamon ſliced fine, and put them together, and let them ſtand two dayes; then diſtil them in a Limbeck or glaſſe ſtill.

To make Worm-wood water.

To make wormwood water, take two gallons of good Ale, a pound of Anniſeeds, half a pound of Lycoras, & beat them very fine; & then take two good handfulls of the crops of Wormwood and put them into the Ale, and let them ſtand all night, and then diſtill them in a Limbeck with a moderate fire.

To make ſweet-water.

To make ſweet water of the beſt kind, take a thouſand Damask Roſes, two good handfuls of Lavender tops, a three penny weight of Mace, two ounces of Cloves bruiſed, a quart of running water: put a little water into the bottome of an earthen pot, and then put in your Roſes and Lavender, with the ſpices by little and little, and in the putting in, alwaies knead them down with with your fiſt, and ſo continue it until you have wrought up all your Roſes and Lavender, and in the working between put in alwayes a little of your water; then ſtop your pot cloſe, and let it ſtand in four dayes, in which time, every morning and evening put in your hand, and pull from the bottome of your pot the ſaid Roſes, working it for a time, and then diſtill it, and hang in the glaſs of water a grain or two of Muſk wrapt in a piece of Sarcenet or fine cloth.

Another way. Others to make ſweet Water, take of Ireos two ounces, of Calamus half an ounce, of Cypreſs roots half an ounce, of yellow Sanders nine drams, of Cloves bruiſed one ounce, of Storax and Calamint one ounce, and of Musk twelve grains, and infuſing all theſe in Roſe-water diſtil it.

To make Date Leach. To make an Excellent Date-Leach, take Dates, and take out the ſtones, and the white rind, and beat them with Sugar, Cinamon and Ginger, very finely; then work it as you would work a peece of paſte, and then print them as you pleaſe.

To make Suger plate. To make a kind of Suger plate, take Gum Dragon, and lay it in Roſt water two dayes: then take the powder of fair Heppes & Suger, and the juyce of an Orenge, beat all theſe together in a morter, then take it out, and work it with your hand and print it at your pleaſure.

To make ſpice Cakes. To make Excellent ſpice Cakes, take half a peck of very fine Wheat-flower, take almoſt one pound of ſweet butter, and ſome good milk and cream mixt together, ſet it on the fire, and put in your butter, and a good deal of Suger, and let it melt together: then ſtrain Saffron into your milk a good quantity: then take ſeven or eight ſpoonfulls of good Ale barm, and eight eggs with two yolks, and mixe them together, then put your milk to it when it is ſomewhat cold, and into your flowre put ſalt, Anniſeeds bruiſed, Cloves, and Mace, and a good deal of Cinamon; then work all together good and ſtiff, that you need not work in any flowre after, then put in a little Roſe water cold, then rubbe it well in the thing you knead it in and work it throughly: if it be not ſweet enough, ſcrape in a little more ſuger, and pull it all in pieces, and hurl in a good quantity of currants, and ſo work all together again, and bake your cake as you ſee cauſe, in a gentle warm Oven.

To make Banbury cakes. To make a very good *Banbury Cake*, take four pounds of currants, and waſh and pick them very clean, and dry them in a cloth: then take three Eggs, and put away one yolk, and beat them and ſtrain them with Barm, putting thereto cloves, Mace, Cinamon, and Nutmeggs, then take a pint of creame, and as much mornings milk, and ſet it on the fire till the cold be taken away; then take flowre, and put in good ſtore of cold

cold butter and ſugar, then put in your egges, barme, and meale, and work them all together an hour or more; then ſave a part of the paſte, and the reſt break in pieces, and work in your Currants; which done, mould your Cake of what quantity you pleaſe, and then with that paſte which hath not any Currants, cover it very thin, both underneath, and aloft. And ſo bake it according to the bigneſſe.

To make the beſt March-pane, take the beſt Jordan Almonds, and blaunch them in warm water, then put them into a ſtone morter, and with a wooden peſtell beat them to pap, then take of the fineſt refined Sugar, well ſearſt, and with it Damaske Roſe-water, beat it to a good ſtiffe paſte, allowing almoſt to every Jordan Almond, three ſpoonfulls of Sugar: then when it is brought thus to a paſte, lay it upon a fair Table, and ſtrowing ſearſt-ſugar under it, mould it like leaven, then with a roling pin role it forth, and lay it upon wafers, waſht with Roſe-water; then pinch it about the ſides, and put it into what form you pleaſe; then ſtrow ſearſt Sugar all over it, which done, waſh it over with Roſe-water and Sugar mixt together, for that will make the Ice; then adorn it with Comfets, guilding, or whatſoever devices you pleaſe, and ſo ſet it into a hot ſtove, and there bake it criſpy, and ſerve it forth. Some uſe to mixe with the paſte, Cinamon, and Ginger finely ſearſt, but I referre that to your particular taſte. To make the beſt March-pane.

To make paſte of *Genoa*, you ſhall take Quinces after they have been boyled ſoft, and beat them in a morter with refined ſugar, Cinamon, and Ginger finely ſearſt, and damask Roſe-water, till it come to a ſtiffe paſt; and role it forth, and print it, and ſo bake it in a ſtove: and in this ſort, you may make paſte of Pears, Apples, Wardens, Plummes of all kinds, Cherries, Barberries, or what other fruits you pleaſe. To make paſte of *Genoa*, or any other paſt.

To make conſerve of any fruit you pleaſe, you ſhall take the fruit you intend to make conſerve of, and if it be ſtone-fruit, you ſhall take out the ſtones: if other fruit, take away the paring and core, and then boyl them in faire running water, to a reaſonable height: then draine them from thence, and put them into a freſh veſſell with Claret Wine, or White Wine, according to the colour of the fruit: and ſo boyl them To make any Conſerve.

to a thick pap, all to maſhing, breaking, and ſtirring them together: and then to every pound of pap, put to a pound of ſugar, and ſo ſtirre them all well together, and being very hot, ſtraine them through faire ſtrainers, and ſo pot it up.

To make a conſerve of Flowers.

To make conſerve of Flowers, as Roſes, Violets, Gilliflowers, and ſuch like; you ſhall take the flowers from the ſtalks, and with a pair of ſheeres cut away the white ends at the roots thereof, and then put them into a ſtone morter, or wooden brake, and there cruſh, or beat them, till they be come to a ſoft ſubſtance: and then to every pound thereof, take a pound of fine refined ſugar, well ſearſt, and beat it all together, till it come to one intire body, and then pot it up, and uſe it as occaſion ſhall ſerve.

To make wafers.

To make the beſt Wafers, take the fineſt wheat flower you can get, and mixe it with creame, the yolks of egges, Roſe-water, Sugar, and Cinamon, till it be a little thicker than Pancake-batter, and then warming your wafer Irons on a charcoal-fire, annoint them firſt with ſweet butter, and then lay on your batter, and preſſe it, and bake it white or brown at your pleaſure.

To make Marmalade of Oranges.

To make an excellent Marmalade of Oranges, take the Oranges, and with a knife pare off as thin as is poſſible the uppermoſt rind of the Orange; yet in ſuch ſort, as by no meanes you alter the colour of the Orange: then ſteep them in faire water, changing the water twice a day, till you find no bitternesſe of taſt therein; then take them forth, and firſt boyl them in faire running water, and when they are ſoft, remove them into Roſe-water, and boyl them therein till they break: then to every pound of the pulpe, put a pound of refined Sugar, and ſo having maſht, and ſtirring them all well together, ſtraine it through very fair ſtrainers into boxes, and ſo uſe it as you ſhall ſee occaſion.

Additions to banquetting-ſtuffe.

Take a pottle of fine flower, and a pound of Sugar, a little Mace, and good ſtore of water to mingle the flower into a ſtiffe paſte, and a good ſeaſon of ſalt, and ſo knead it, and role out the cakes thin, and bake them on papers.

To make fine Cakes.

Fine bread.

Take a quarter of a pound of fine ſugar well beaten, and as much

much flower finely bolted, with a quantity of Anniſeeds a little bruiſed, and mingle all together; then take two egges, and beat them very well, whites and all; then put in the mingled ſtuff aforeſaid, and beat all together a good while, then put it into a mould, wiping the bottome ever firſt with butter, to make it come out eaſily, and in the baking, turn it once or twice as you ſhall have occaſion, and ſo ſerve it whole or in ſlices at your pleaſure.

To preſerve Quinces for Kitchin ſervice.

Take ſweet Apples, and ſtamp them as you do for Cider, then preſſe them through a bag as you do Verjuyce, then put it into a firkin wherein you will keep your quinces, and then gather your quinces, and wipe them clean, and neither core them nor pare them, but only take the blacks from the Tops, and ſo put them into the firkin of Cider, and therein you may keep them all the year very fair, and take them not out of the liquor, but as you are ready to uſe them, whether it be for pyes, or any other purpoſe, and then pare them, and core them as you think good.

To make Ipocras.

Take a gallon of Claret or White Wine, and put therein four ounces of Ginger, an ounce and a half of Nutmegs, of Cloves one quarter, of Sugar four pound; let all this ſtand together in a pot at leaſt twelve houres, then take it, and put it into a cleane bagge made for the purpoſe, ſo that the Wine may come with good leiſure from the ſpices.

To preſerve Quinces.

Take quinces and wipe them very cleane, and then core them, and as you core them, put the cores ſtrait into fair water; and let the cores and the water boyl, when the water boyleth, put in the quinces unpared, and let them boyl till they be tender, and then take them out, and pare them, and ever as you pare them, put them ſtrait into ſugar finely beaten: then take the water they were ſodden in, and ſtraine it through a fine cloth, and take as much of the ſame water as you think will make ſirrup enough for the quinces, and put in ſome of your ſugar and let it boyl a while, and then put in your quinces, and let them boyl a while, and turn them, and caſt a good deal of Sugar upon them; they muſt ſeeth a pace, and ever as you turn them, cover them ſtill with Sugar, till you have beſtowed all your Sugar; and when you think that your quinces are tender enough, take them forth, and if your ſirrup be not ſtiff enough,

you may ſeeth it againe after the quinces are forth. To every pound of quinces you muſt take more than a pound of Sugar, for the more Sugar you take, the fairer your quinces will be, and the better and longer they will be preſerved.

Conſerve of Quinces.

Take two gallons of fair water, and ſet it on the fire, and when it is luke warme, beat the whites of five or ſix egges, and put them into the water, and ſtirre it well, and then let the water ſeeth, and when it riſeth up all on a curd, then ſcumme it off. Take quinces and pare them, and quarter them, and cut out the core: Then take as many pound of your quinces as of your Sugar, and put them into your liquor, and let it boyl till your liquor be as high coloured as French Wine; and when they be very tender, then take a faire new Canvas cloth fair waſht, and ſtrain your quinces through it with ſome of your liquor; (if they will not goe through eaſily:) then if you will make it very pleaſant, take a little Muſk, and lay it in Roſe-water, and put it thereto, then take and ſeeth it, untill it be of ſuch ſubſtance, that when it is cold, it will cut with a knife; and then put it into a faire boxe, and if you pleaſe lay leafe-gold thereon.

☞ To keep Quinces all the year.

Take all the parings of your quinces that you make your conſerve withall, & three or four other quinces, and cut them in pieces and boyl the ſame parings, and the other pieces, in two or three gallons of water, and ſo let them boyle till all the ſtrength be ſodden out of the ſame quinces and parings; and if any skum ariſe whileſt it boyles, take it away; then let the ſaid water run thorough a ſtrainer into a fair veſſell, and ſet it on the fire again, and take your quinces that you will keep, and wipe them clean, and cut off the uttermoſt part of the ſaid quinces, and pick out the kernels and cores as clean as you can, and put them into the ſaid liquor, and ſo let them boyl till they be a little ſoft, and then take them from the fire, and let them ſtand till they be cold, then take a little barrel, and put into the ſaid barrel the water that your quinces be ſodden in; then take up your quinces with a Ladle, and put them into your barrel, and ſtop the barrel cloſe, that no aire come into them, till you have fit occaſion to uſe them; and be ſure to take ſuch quinces as are neither bruiſed nor rotten.

Take

Take of the best sugar, and when it is beaten, searse it very fine, and of the best Ginger, and Cinamon; then take a little Gumdragon, and lay it in Rose-water all night, then pour the water from it, and put the same with a little white of an egge well beaten into a brass mortar, the sugar, ginger, cinamon, and all together, and beat them together till you may work it like paste; then take it and drive it forth into cakes, and print them, and lay them before the fire, or in a very warm stove to bake. Or otherwise, take Sugar and Ginger, (as is before said) cinamon and gum-dragon excepted, instead whereof, take onely whites of Eggs, and so do as was before shewen you. Fine Ginger Cakes.

Take curds, the paring of Lemons, of Oranges, or Pomcitrons, or indeed any half ripe green fruit, and boyl them till they be tender in sweet wort; then make a sirrop in this sort, take three pound of Sugar, and the whites of four egges, and a gallon of water, then swing and beat the water and the egges together, and then put in your Sugar, and set it on the fire, and let it have an easier fire, and so let it boyl six or seven walmes, and then strain it through a cloth, and set it on again till it fall from the spoon, and then put it into the rinds or fruits. To make Suckets.

Take a quart of Honey clarified, and seeth it till it be brown, and if it be thick, put to it a dish of water: then take fine crums of white bread grated, and put to it, and stirre it well, and when it is almost cold, put to it the powder of Ginger, Cloves, Cinamon, and a little Licoras and Anniseeds: then knead it, and put it into a mould and print it; some use to put to it also a little Pepper, but that is according unto taste and pleasure. Course Ginger bread.

Dissolve sugar, or sugar-candy in Rose-water, boile it to an height, put in your roots, fruits or flowers, the sirrop being cold, then rest a little; after take them out, and boyl the sirrop again, then put in more roots, &c. then boyl the sirrop the third time to an hardnesse, putting in more Sugar, but not Rose-water, put in the roots, &c. the sirrop being cold, and let them stand till they candy. To candy any root, fruits, or flowers.

Thus having shewed you how to preserve, conserve, candy, and make pasts of all kinds, in which four heads consists the whole Art of banqueting dishes; I will now proceed to the ordering Ordering of Banquets.

of

or setting forth of a banquet, wherein you shall observe that March-panes have the first place, the middle place, and last place: your preserved fruits shall be diſht up first, your pasts next, your wet suckets after them, then your dried suckets, then your Marmalades, and cotiniates, then your comfets of all kinds; Next your Peares, Apples, Wardens, bakt, raw, or rosted, and your Oranges and Lemons sliced; and lastly your Wafer-cakes. Thus you shall order them in the closet, but when they goe to the Table, you shall first send forth a diſh made for shew only, as Beast, Bird, Fish, Fowl, according to invention: then your March-pane, then preserved Fruit, then a Past, then a wet sucket, then a dry sucket, Marmalade, comfets, apples, peares, wardens, Oranges and Lemons sliced, and then wafers, and another diſh of preserved fruits; and so consequently all the rest before, no two diſhes of one kind, going or standing together, and this will not only appear delicate to the eye, but invite the appetite with the much variety thereof.

Ordering of great Feasts, and proportion of expence

Now we have drawn our *House-wife* into these severall Knowledges of Cookery, in as much as in her is contained all the inward Offices of Houshold, we will proceed to declare the manner of serving and setting forth of meat for a great Feast, and from it derive meaner, making a due proportion of all things; for what availes it our good *House-wife* to be never so skilfull in the parts of Cookery, if she want skill to marshall the diſhes, and set every one in his due place, giving precedency according to fashion and custome. It is like to a Fencer leading a band of men in a rout, who knows the use of the weapon, but not how to put men in order. It is then to be understood, that it is the Office of the Clerk of the Kitchin, (whose place our *House-wife* must many times supply) to order the meat at the Dresser, and deliver it unto the Sewer, who is to deliver it to the Gentlemen, and Yeomen-waiters to bear to the Table. Now because we allow no Officers but our *House-wife*, to whom we only speak in this Book, she shall first marshall her Sallets, delivering the Grand Sallet first, which is evermore compound: then green Sallets, then boyled Sallets, then some smaller compound Sallets. Next unto Sallets, she shall deliver forth all her Fricases, the simple first, as Collops, Rashers, and such like, then

then compound Fricases; after them all, her boyled meates in their degree, as simple broths, stewd-broths, and the boylings of sundry Fowles. Next them, all sorts of Roast-meates, of which the greatest first, as chine of Beef, or surloyne, the gigget or legges of Mutton, Goose, Swan, Veale, Pigge, Capon, and such like. Then bak'd meats, the hot first, as Fallow-Deer in Pasty, Chickens, or Calves foot pye and Douset. Then cold bak'd meates, Pheasant, Patridges, Turkey, Goose, Wood-cock, and such like. Then lastly, Carbanados, both simple and compound. And being thus Marshall'd from the Dresser, the Sewer upon the placing them on the Table, shall not set them down as he received them, but setting the Sallets extravagantly about the Table, mixe the Fricases about them, then the boyld meats amongst the Fricases, rost meats amongst the boyld, bak'd meats amongst the rost, and Carbonados amongst the bak'd; so that before every Trencher may stand a Sallet, a Fricase, a boyld meat, a rost meat, a bak'd meat, and a Carbonado, which will both give a most comely beauty to the Table, and very great contentment to the Guests. So likewise in the second course, she shall first preferre the lesser Wild-fowl, as Mallard, Teyl, Snipe, Plover, Wood-cock, and such like: then the lesser Land-fowl, as Chicken, Pidgeons, Patridge, Raile, Turkey, Chickens, young Pea-hens, and such like.

Then the great Wild-fowl, as Bitter, Hearn, Shoveler, Crane, Bustard, and such like. Then the greater Land fowls, as Peacocks, Pheasant, Puets, Gulls, and such like. Then hot bak'd meats, as Marrow-bone pye, Quince-pye, Florentine, and Tarts.

Then cold bak'd meats, as Red Deer, Hare-pye, Gammon of Bacon-pye, Wild-bore, Roe-pye, and such like, and these also shall be marshald at the Table as the first course, not one kind all together, but each severall sort mixt together, as a lesser Wild-fowle, and a lesser Land-fowle, a great Wild-foule, and a great Land-fowle, a hot bak'd meat and a cold; and for made dishes and Quelquechoses, which rely on the invention of the Cook, they are to be thrust in into every place that is empty, and so sprinkled over all the Table: and that is the best method for the extraordinary great Feasts of Princes.

Princes. But in caſe it be for much more humble men, then leſſer care and fewer diſhes may diſcharge it: Yet before I proceed to that lower rate, you ſhall underſtand, that in theſe great Feaſts of Princes, though I have mentioned nothing but Fleſh, yet is not Fiſh to be exempted; for it is a beauty and an honour unto every Feaſt, and is to be placed amongſt all the ſeverall ſervices, as thus: amongſt your Sallets, all ſorts of ſouſed fiſh that lives in the freſh water; amongſt your Fricaſes all manner of fryed fiſh; amongſt your boyld meats, all fiſh in broths; amongſt your roſt meats, all fiſh ſerved hot, but dry; amongſt the bak'd meats, ſea-fiſh that is ſouc'd, as Sturgion, and the like; and amongſt your Carbonados fiſh that is broyld. As for your ſecond Courſe, to it belongeth all manner of ſhell-fiſh, either in the ſhell, or without; the hot to go up with the hot meat, and the cold with the cold.

And thus ſhall the Feaſt be Royall, and the Service Worthy.

Now for a more humble Feaſt, or an ordinary proportion which any good man may keep in his Family, for the entertainment of his true and worthy friends, it muſt hold limitation with his proviſion, and the ſeaſon of the year; For Summer affords what Winter wants, and Winter is Maſter of that, which Summer can but with difficulty have: it is good then for him that intends to Feaſt, to ſet down the full number of his full diſhes, that is, diſhes of meat that are of ſubſtance, and not empty, or for ſhew; and of theſe ſixteen is a good proportion for one courſe unto one meſſe, as thus, for example; Firſt, a ſhield of Brawn with muſtard, Secondly, a boyld Capon, Thirdly, a boyld piece of Beef, Fourthly, a chine of Beef roſted, Fifthly, a Neats tongue roſted, Sixthly, a Pigge roſted, Seventhly, Chewets bak'd, Eighthly, a Gooſe roſted, Ninthly, a Swan roſted, Tenthly, a Turkey roſted, the Eleventh, a haunch of Veniſon roſted, the Twelfth, a Paſty of Veniſon, the Thirteenth, a Kid with a pudding in the belly, the Fourteenth, an Olive-pye, the Fifteenth, a couple of Capons, the Sixteenth, a Cuſtard or Douſets. Now to theſe full diſhes may be added Sallets, Fricaſes, Quelquechoſes, and de-

deviſed paſte, as many diſhes more which make the full ſervice no leſs then two and thirty diſhes, which is as much as can conveniently ſtand on one Table, and in one meſs; and after this manner you may proportion both your ſecond and third courſe, holding fulneſs in one half of the diſhes, and ſhew in the other, which will be both frugall in the ſpender, contentment to the gueſt, and much pleaſure and delight to the beholders. And thus much touching the ordering of great feaſts, and ordinary contentments.

CHAP. III.

Of Diſtillations, and their vertues, and of Perfuming.

WHen your Engliſh Houſe wife is exact in theſe Rules before rehearſed, and that ſhe is able to adorn and beautifie her Table, with all the vertuous illuſtrations meet for her knowledge; ſhe ſhall then ſort her mend to the underſtanding of other Houſewifely ſecrets, right profitable and meet for her uſe, ſuch as the want thereof may trouble her when need or time requires.

Therefore firſt I would have her furniſh her ſelf of very good Stills, for the Diſtillation of all kinds of Water, which ſtills would either be of Tin, or ſweet Earth, and in them ſhe ſhall diſtill all ſorts of Waters meet for the health of her Houſhold, as Sage water, which is good for all Rhumes, and Collicks; Raddiſh water, which is good for the ſtone; Angelica water good againſt infection: Celadine water for ſore eyes: Vine water for itchings; Roſe water, and Eye bright water for dimme ſights; Roſemary water for Fiſtulaes: Treacle water for mouth-Cankers; Water of Cloves for the pain in the Stomack: Saxifrage water for Gravell and hard Urine; Allom water for old Ulcers, and a world of others, any of which will laſt a full year at the leaſt. Then ſhe ſhall know that the beſt waters for the ſmoothing of the skinne, and keeping the face delicate and amiable, are thoſe which are diſtilled from Beanflowrs, from Strawburies, from Vine leaves, from Goates-milk, from Aſſes milke, from the whites of Egges, from the flowrs

Of the nature of waters.

flowres of Lillies, from Dragons, from Calves feet, from bran, or from yolks of Eggs, any of which will laſt a year or better.

Additions to diſtillations.

To diſtil water of the colour of the herb or flowre you deſire.

First diſtil your water in a ſtillatory, then put it in a glaſſe of great ſtrength, and fill it with thoſe flowrs again (whoſe colour you deſire) as full as you can, and ſtop it, and ſet it in the ſtillatory again, and let it diſtil, and you ſhall have the colour you diſtil.

To make Aquavitæ.

Take of Roſemary flowres two handfulls, of Marjoram, Winter ſavory, Roſemary, Rue, unſet Time, Germander, Ribwort, Harts tongue, Mounſeare, white Worm wood, Bugloſſe, Red Sage, Liver wort, Hoar hound, fine Lavender, Iſſop-crops, Penny-royal, Red fennel, of each of theſe one handfull; of Elicampane roots, clean pared and ſliced, two handfulls: Then take all theſe aforeſaid and ſhred them, but not waſh them, then take four gallons and more of ſtrong Ale, and one gallon of Sack lees, and put all theſe aforeſaid herbes ſhred into it, and then put into it one pound of Lycoras bruiſed, half a pound of Anniſeeds clean ſifted and bruiſed, and of Mace and Nutmegs bruiſed of each one ounce: then put all together into your ſtilling pot, cloſe covered with Rye paſte, and make a ſoft fire under your pot, and as the head of the Limbecke heateth, draw out your hot water and put in cold, keeping the head of your Limbeck ſtill with cold water, but ſee that your fire be not too raſh at the firſt, but let your water come at leiſure; and take heed unto your ſtilling, that your water change not white: for it is not ſo ſtrong as the firſt draught is; and when the water is diſtilled, take a gallon glaſſe with a wide mouth, and put therein a pottle of the beſt water and cleereſt, and put into it a pottle of *Roſa ſolis*, and halfe a pound of Dates bruiſed, and one ounce of graines, and halfe a pound of Suger, halfe a pound of ſeed pearl beaten, three leaves of fine Gold, ſtirre all theſe together well, then ſtop your glaſſe, and ſet it in the Sunne the ſpace of one or two months, and then clarifie it, and uſe it at your diſcretion: for a ſpoonfull or two at a time is ſufficient, and the vertues are infinite.

Another Excellent Aquavitæ.

Fill a pot with red Wine clean and ſtrong, and put therein the

the powders of Cammomile, Gilly flowrs, Ginger, Pellitory, Nutmegge, Gallengal, Spicknard, Quenebus, Grains of pure long pepper, black pepper, Cummine, Fennel ſeed, Smalledge, Parſley, Sage, Rue, Mint, Calamint, and Horſhow of each of them alike quantity, and beware they differ not the weight of a dramme under or above: then put all the powders aboveſaid into the wine, and after put them into the diſtilling pot, and diſtil it with a ſoft fire, and look that it be well luted about with Rye paſte, ſo that no fume or breath goe forth, and looke, that the fire be temperate: alſo receive the water out of the Lymbeck into a glaſſe Vial. This water is called the water of Life, and it may be likened to Balme for it hath all the vertues and properties which Balme hath. This water is cleere, and lighter than Roſe water, for it will fleet above all liquors, for if oyle bee put above this water, it ſinketh to the bottome. This water keepeth Fleſh, and Fiſh, both Raw, and Sodden, in his own kind and ſtate, it is good againſt Aches in the Bones, the Pox, and ſuch like: neither can any thing kept in this water either rot or putrifie; it doth draw out the ſweetneſſe, ſavour, and vertues of all manner of ſpices, roots and herbs that are wet or layd therein: it gives ſweetneſſe to all manner of water that is mixt with it, it is good for all manner of cold ſickneſſes, and namely for the Palſie or trembling joynts, and ſtretching of the ſinews; it is good againſt the cold gout, and it maketh an old man ſeeme young, uſing to drink it faſting, and laſtly it fretteth away dead fleſh in wounds, and killeth the Canker.

To make Aqua compoſita.

Take Roſemary, Time, Iſſop, Sage, Fennel, Nip, rootes of Elicampane, of each an handfull, of Marjoram and Penny-Royal of each half a handfull, eight ſlips of red Mint, halfe a pound of Lycoras, half a pound of Anniſeeds, and two Gallons of the beſt Ale that can be brewed, waſh all theſe herbs clean, and put into the Ale, Lycoras, Anniſeeds, and herbs into a clean braſs pot, and ſet your Limbeck thereon, and paſte it round about that no ayr come out, then diſtil the water with a gentle fire, and keep the Limbeck coole above, not ſuffering it to runne too faſt; and take heed when your water changeth

changeth colour, to put another glaſs under, and keep the firſt water for it is moſt precious, and the latter water keep by it ſelfe and put it into your next pot, and that ſhall make it much better.

A very Principal Aqua-compoſita.

Take of Balm, of Roſemary flowres, tops and all, of dryed Red Roſe leaves, of Penny-royal, of each of theſe a handfull, one roote of Elicampane, the whiteſt that can be got, three quarters of a pound of Lycoras, two ounces of Cinamon, two Drammes of great Mace, two Dramms of Gallengal, three dramms of Coriander ſeeds, three drammes of Carraway ſeeds, two or three Nutmegs cut in four quarters, an ounce of Anniſeeds, a handfull of borrage. you muſt chuſe a fair Sunny day to gather the herbs in; you muſt not waſh them, but cut them in ſunder, and not too ſmall; then lay all your herbs in ſouſe all night and a day, with the ſpices groſly beaten or bruiſed, and then diſtill it in order aforeſaid: this was made for a learned Phyſitians own drinking.

To make the Emperial water.

Take a gallon of Gaſcoine Wine, Ginger, Gallengall Nutmegs, Grains, Cloves, Anniſeeds, Fennel ſeeds, Carraway ſeeds, of each one dramme, then take Sage, Mint, Red roſes, Time, Pellitory, Roſemary, Wild-time, Camomil and Lavender, of each a handfull, then bray the ſpices ſmall, and the herbs alſo, and put all together into the Wine, and let it ſtand ſo twelve hours, ſtirring it ſo di vers times, then diſtil it with a Limbeck, and keep the firſt water, for it is the beſt: of a Gallon of Wine you muſt not take above a quart of Water, this Water comforteth the Vital ſpirits, and helpeth the inward diſeaſes that come of cold, as the palſie, the contraction of ſinews; alſo it killeth wormes, and comforteth the ſtomack, it cureth the cold Dropſie, helpeth the ſtone, the ſtinking breath, and maketh one ſeeme young.

To make Cinamon water.

Take a pottle of the beſt Sack, and halfe a pint of Roſe-water, a quarter and halfe pound of good Cinamon well bruiſed but not ſmall beaten, diſtill all theſe together in a Glaſſe-ſtill, but you muſt carefully look to it, that it boyl not over haſtily, and attend it with cold wet cloaths to cool the top of the ſtill if the water ſhould offer to boyle too haſtily. This water is very Soveraign for the ſtomack, the head, and all the inward

inward parts, it helps digeſtion, and comforteth the vitall ſpirits.

1. Take Fennell, Rue, Vervine, Endive, Bettony, Germander, Red-roſe, Capillus Veneris, of each an ounce; ſtamp them, and keep them with white Wine a day and a night, and diſtill water of them, which water will divide in three parts: the firſt water you ſhall put in a glaſſe by it ſelf, for it is more precious than gold, the ſecond as ſilver, and the third as balm, and keep theſe three parts in glaſſes: this water you ſhall give the Rich for gold, to meaner for ſilver, to Poor men for balm. This water keepeth the ſight in clearneſſe, and purgeth all groſſe humors. Six moſt precious waters, which *Hippocrates* made & ſent to a queen ſometimes living in *England*.

2. Take Salgemma a pound, and lap it in a green dockleaf, and lay it in the fire till it be well roſted and wax white, then put it in a glaſſe againſt the air a night, and on the morrow it ſhall be turned to a white water like unto Chryſtall, keep this water well in a glaſſe, and put a drop into the eye, and it ſhall cleanſe and ſharp the ſight: It is good for any evill at the heart, for the Morphew, and the Canker in the mouth, and for divers other evils in the body.

3. Take the roots of Fennell, Parſly, Endive, Bettony, of each an ounce, and firſt waſh them well in luke-warm water, and bray them well with white Wine a day and a night, and then diſtill them into water: This water is more worthy than Balme; it preſerveth the ſight much, and cleanſeth it of all filth, it reſtraineth teares, and comforteth the head, and avoideth the water that commeth through the pain of the head.

4. Take the ſeeds of Parſley, Achannes, Vervine, Carawayes, and Centaury, of each ten drams, beat all theſe together, and put it in warm water a day and a night, and put it in a veſſell to diſtill: This water is a precious water for all ſore eyes, and very good for the health of Mans or Womans body.

5. Take Limmell of Gold, Silver, Lattin, Copper, Iron, Steele, and Lead; and take Lethargy of Gold and Silver, take Calamint, and Columbine, and ſteep all together, the firſt day in the Urine of a man-child, that is between a day and a

night; the ſecond day in white Wine; the third day in the juyce of Fennel; the fourth day in the white of Egges; the fifth day in womans milke that nourſeth a man-child; the ſixth day in red Wine; the ſeventh day in the whites of Egges; and upon the eighth day bind all theſe together, and diſtill the water of them, and keep this water in a veſſell of Gold or Silver: The vertues of this water are theſe: Firſt, It expelleth all Rhumes, and doth away all manner of ſickneſſe from the eyes, and weares away the pearl, pin and web: it draweth again into his own kind the eye-lids that have been bleared, it eaſeth the ache of the head, and if a man drink it, it maketh him look young, even in old age; beſides a world of other moſt excellent vertues.

6. Take the Goldſmiths-ſtone, and put it into the fire, till it be red hot, and quench it in a pint of white Wine, and do ſo nine times, and after grind it, and beat it ſmall, and cleanſe it as clean as you may, and after ſet it in the Sun with water of Fennell diſtilled, and Vervine, Roſes, Celladine, and Rue, and a little Aquavitæ; and when you have ſprinkled it in the water nine times, put it then in a veſſell of glaſſe, and yet upon a reverſion of the water diſtill it, till it paſſe over the touch four or five inches; and when you will uſe it, then ſtirre it all together, and then take up a drop with a feather, and put it on your nail, and if it abide, it is fine and good: then put it in the eye that runneth, or annoint the head with it if it ake, and Temples, and, believe it, that of all waters this is the moſt precious, and helpeth the ſight, or any pain in the head.

The vertues of ſeverall waters.

The water of Chervile is good for a ſore mouth.

The water of Calamint is good for the ſtomack.

The water of Plantain is good for the fluxe, and the hot dropſie.

Water of Fennell is good to make a fat body ſmall, and alſo for the eyes.

Water of Violets is good for a man that is ſore within his body, and for the reins, and for the liver.

Water of Endive is good for the Dropſie, and for the Jaundiſe and the ſtomack.

Water

Water of Borage is good for the ſtomack, and for the Illiaca paſſio, and many other ſickneſſes in the body.

Water of both Sages is good for the Palſie.

Water of Bettony is good for old age, and all inward ſickneſſes.

Water of Radiſh, drunk twice a day, at each time an ounce, or an ounce and a half, doth multiply and provoke Luſt, and alſo provoketh the terms in women.

Roſemary water, (the face waſhed therein both morning and night) cauſeth a fair and clear countenance; alſo the head waſhed therewith, and let dry of it ſelf, preſerveth the falling of the haire, and cauſeth more to grow: alſo two ounces of the ſame drunk, driveth Venome out of the body in the ſame ſort as Mithridate doth; the ſame twice or thrice drunk, at each time half an ounce, rectifieth the mother, and it cauſeth women to be fruitfull. When one maketh a bath of this decoction, it is called the bath of Life: the ſame drunk, comforteth the heart, the brain, and the whole body; and cleanſeth away the ſpots of the face; it maketh a woman look young, and cauſeth women to conceive quickly, and hath all the vertues of Balm.

Water of Rew, drunk in a morning four or five dayes together, at each time an ounce, purifieth the flowers in women: the ſame water drunk in the morning faſting, is good againſt the griping of the bowels, and drunk at morning, and at night, at each time an ounce, it provoketh the termes in women.

The water of Sorrell drunk, is good for all burning and peſtilent Feavers, and all other hot ſickneſſes: being mixt with Beere, Ale, or Wine, it ſlaketh the thirſt: it is alſo good for the Yellow Jaundiſe, being taken ſix or eight dayes together: it alſo expelleth from the Liver, if it be drunk, and a cloath wet in the ſame, and a little wrung out, and ſo applied to the right ſide over againſt the Liver, and when it is dry, then wet another, and apply it; and thus do three or four times together.

Laſtly, the water of Angelica is good for the head, for inward infection, either of plague or peſtilence, it is very ſoveraign

veraign for ſore breaſts; alſo the ſame water being drunk of, twelve or thirteen daies together, is good to unlade the ſtomack of groſſe humours and ſuperfluities, and it ſtrengthneth and comforteth all the univerſall parts of the body: and laſtly, it is a moſt ſoveraign medicine for the Gout, by bathing the diſeaſed members much therein.

Now to conclude and knit up this Chapter, it is meet that our Houſwife know that from the eighth of the Kalends of the Month of *April*, unto the eighth of the Kalends of *July*, all manner of herbs and leaves are in that time moſt in ſtrength, and of the greateſt vertue to be uſed and put in all manner of Medicines; alſo from the eighth of the Kalends of *July*, unto the eighth of the Kalends of *October*, the ſtalkes, ſtems, and hard branches of every herb and plant is moſt in ſtrength to be uſed in Medicines; and from the eighth of the Kalends of *October*, unto the eighth of the Kalends of *April*, all manner of roots of herbs and plants are the moſt of ſtrength and virtue to be uſed in all manner of Medicines.

An excellent water for perfume.

To make an excellent ſweet water for perfume, you ſhall take of Baſill, Mints, Marjerome, Corn-flagge-roots, Iſſop, Savory, Sage, Balme, Lavender and Roſemary, of each one handfull; of Gloves, Cinamon, and Nutmegs, of each half an ounce; then three or four Pomcitrons cut into ſlices, infuſe all theſe into Damask-Roſe-water, the ſpace of three daies, and then diſtill it with a gentle fire of Char-coal, then when you have put it into a very clean glaſſe, take of fat Muſk, Civet, and Amber-greece, of each the quantity of a ſcruple, and put it into a ragge of fine Lawn, and then hang it within the water. This being burnt either upon a hot pan, or elſe boyled in perfuuing-pans with Cloves, Bay-leaves, and Lemon-pills, will make the moſt delicateſt perfume that may be, without any offence, and will laſt the longeſt of all other ſweet perfumes, as hath been found by experience.

To perfume Gloves.

To perfume Gloves excellently, take the oyle of ſweet Almonds, oyle of Nutmegs, oyl of Benjamin, of each a dram, of Amber-greece, one grain, fat Muſk two graines: mixe them all together, and grind them upon a Painters ſtone, and then annoint the Gloves therewith, yet before you annoint them

them, let them be dampishly moistned with Dammask Rose-water.

To perfume a Jerkin well, take the oyl of Benjamin a penny-worth, oyl of spike and oyl of olives, half penny worths of each, and take two spunges, and warme one of them against the fire and rub your jerkin therewith, and when the oyl is dryed take the other spunge and dip it in the oyl, and rub your jerkin therewith till it be dry, then lay on the perfume before prescribed for gloves. To perfume a jerkin.

To make very good washing balls, take Storax of both kinds, Benjamin, Calamus Aromaticus, Labdanum, of each alike; and bray them to powder with Gloves and Orris; then beate them all with a sufficient quantity of Sope till it be stiffe, then with your hand you shal work it like paste, and make round balls thereof. To make Washing-balls.

To make Musk balls, take Nutmegges, Mace, Cloves, Saffron, and Cinamon, of each the weight of two pence, and beat it to fine powder, of Mastick the weight of two pence half penny, of Storax the weight of six pence, of Labdanum the weight of ten pence; of Ambergreece the weight of sixpence; and of Musk four graines, dissolve and work all these in hard sweet sope till it come to a stiff paste, and then make balls thereof. To make a Musk-ball.

To make a good perfume to burn, take Benjamin one ounce, Storax, Calamint two ounces, of Mastick white, Ambergreece, of each one ounce; Ireos, Calamus, Aromaticus, Cypresse wood, of each half an ounce, of Camphire one scruple, Labdanum one ounce; beat all these to powder, then take of Sallow Charcole six ounces, of liquid Storax two ounces, beat them all with Aquavitæ, and then you shall rowl them into long round rowls. A perfume to burn.

To make Pomanders, take two penny worth of Labdanum, two penny worth of Storax liquid, one penny worth of Calamus Aromaticus, as much Balm, half a quarter of a pound of fine wax, of Cloves and Mace two penny worth, of liquid Aloes three penny worth, of Nutmegs eight penny worth, and of Musk four grains; beat all these exceedingly together till they come to a perfect substance, then mould it in any fashion you please, and dry it. To make Pomanders.

To make Vineger.

To make excellent ſtrong Vineger, you ſhall brew the ſtrongeſt Ale that may be, and having tunned it in a very ſtrong veſſel, you ſhall ſet it either in your Garden or ſome other ſafe place abroad, where it may have the whole Summers day Sun to ſhine upon it and there let it lye till it be extream ſowre; then, into a Hogſhead of this Vineger put the leaves of four or five hundred Damask roſes, and after they have layen for the ſpace of a month therein, houſe the vineger and draw it as you need it.

To make dry vineger.

To make dry vineger which you may carry in your pocket, you ſhall take the blacks of green Corn either Wheat or Rye, and beat it in a morter with the ſtrongeſt vineger you can get, till it come to paſte, then roul it into little balls, and dry it in the Sun till it be very hard, then when you have occaſion to uſe it cut a little piece thereof and diſſolve it in Wine, and it will make a ſtrong Vineger.

To make verjuyce.

To make Verjuyce, you ſhall gather your Crabs as ſoon as the Kernels turn black, and having laid them a while in a heape to ſweat together, take them and pick them from the ſtalks, blacks, and rottenneſs: then in long troughs with beetles for the purpoſe, cruſh and break them all to maſh; then make a bagge of coorſe hair-cloath as ſquare as the preſs, and fill it with the cruſht Crabs, then put it into the preſs, and preſſe it, while any moyſture will drop forth, having a clean veſſel underneath to receive the liquor; this done, tun it up in ſweet Hogſheads, and to every Hogſhead put half a dozen handfuls of Dammask-roſe leaves, and then bung it up, and ſpend it as you ſhall have occaſion.

Additions to conceited ſecrets.

Many other pretty ſecrets there are belonging unto curious *Houſ-wifes*: but none more neceſſary than theſe already rehearſed, except ſuch as ſhall hereafter follow in their proper places.

Take of Orris ſix ounces, of Damask Roſe leaves as much, of Marjerom and ſweet Baſil of each an ounce, of Cloves two ounces, yellow Sanders two ounces, of Citron pils ſeven drams, of Lignum aloes one ounce, of Benjamin one ounce, of Storax one ounce, of Muſk one dram; bruiſe all theſe, and put them into a bag of ſilk or linnen, but ſilk is the beſt.

To make ſweet powder for bagge.

Take of Orris four ounces, of Gallaminis one ounce, of Ciris half an ounce, of Roſe leaves dryed two handfuls, of dryed Marjerom

joram one handful, of Spike one handful, Cloves one ounce, Benjamin and Rax of each two ounces, of white Sanders, and yellow of each one ounce, beat all theſe into a groſſe powder, then put to it of Muske a dram, of civet halfe a dram, & of Ambergreece half a dram; then put them into a taffety bag and uſe it. To make ſweet bagges,

Take of Bay-leaves one handfull, of red Roſes two handfuls, of Damask roſes three handfuls, of Lavender four handfuls, of Baſil one handfull, Marjerom two handfuls, of Camomile one handful, of the young ſops of ſweet Bryer two handfuls, of Dandelian Tanſey two handfuls, of Orenge peeles ſix or ſeven ounces, of cloves & mace a groats worth: put all theſe together in a pottle of new Ale in cornes, for the ſpace of three dayes ſhaking it every day three or four times; then diſtil it the fourth day in a Stil with a continual ſoft fire, and after it is diſtilled, put into it a grain or two of musk. How to make ſweet water.

Take a quart of *Malmſey Lees*, or a quart of *Malmſey* ſimply, one handfull of Marjoram, of Baſil as much, of Lavender foure handfulls, Bay leaves one good handfull, Dammask Roſe leaves four handfulls, and as many of Red, the peels of ſixe Orenges, or for want of them one handfull of the tender leaves of Wall-Nut-trees, of Benjamin half an ounce, of Calamus Aromaticus as much, of Camphire four drams, of Cloves one ounce, of Bildamum half an ounce; then take a pottle of running water, and put in all theſe ſpices bruiſed into your water and *malmſey* together, in a cloſe ſtopped pot with a good handfull of Roſemary, and let them ſtand for the ſpace of ſix dayes: then diſtil it with a ſoft Fire: then ſet it in the Sun ſixteen dayes with four grains of musk bruiſed. This quantity will make three quarts of water, *Probatum eſt.* A very Rare and pleaſant Dammask-water.

Take and brew very ſtrong Ale, then take half a dozen Gallons of the firſt running, and ſet it abroad to cool, and when it is cold put yeaſt into it, and head it very ſtrongly; then put it up in a firkin, and diſtil it in the Sun, then take four or five handfull of beans, and parch them in a pan till they burſt: then put them in as hot as you can into the Firkin, and ſtop it with a little clay about the bung hole: then take a handfull of clean Rye-Leaven and put in the Firkin; then take a quantity of barberies, and bruiſe and ſtrain them into the Firkin, and a To make the beſt vineger.

good handfull of Salt, and let them lye and work in the Sun from *May* till *August*; then having their full ſtrength, take Roſe leaves and clip the white ends off, and let them dry in the Sun, then take Elder flowres, and pick them and dry them in the Sun, and when they are dry put them in bags, and keep them all the Winter: then take a pottle pot and draw forth a pottle out of the ſerkin into the pottle, and put a handfull of the red Roſe-leaves, and another of the Elder flowres into the pottle, and then hang it in the Sun, where you may occupy the ſame, and when it is empty, take out all the leaves and fill it again as you did before.

To perfume Gloves. Take Angelico water, and Roſe water, and put into them the powder of Cloves, Amber greece, Muſk, & Lignum Aloes, Benjamin and Calamus aromaticus: boyl theſe till half be conſumed: then ſtrain it and put your Gloves therein; then hang them in the Sun to dry, and turn them often: and thus three times, wet them and dry them again: or otherwiſe, take Roſe water and wet your Gloves therein, then hang them up till they be almoſt dry; then take half an ounce of Benjamin and grind it with the oyle of Almonds, and rub it on the Gloves till it be almoſt dryed in: then take twenty grains of Amber greece, and twenty grains of Muſk, and grind them together with oyl of Almonds, and ſo rub it on the Gloves, and then hang them up to dry, or let them dry in your boſome, and ſo after uſe them at your pleaſure.

CHAP. IV.

The ordering, preſerving, and helping of all ſorts of Wines: and firſt of the choyce of ſweet Wines.

I Do not aſſume to my ſelf this Knowledge of the Vintners ſecrets, but I ingenuouſly confeſſe, that one profeſſt skilfull in the Trade, having rudely written, and more rudely diſcloſed this ſecret, and preferring it to the Stationer, it came to me to be publiſhed, which I have done, knowing that it is neceſſary, &c.

It is neceſſary that our Engliſh Houſwife be skilful in the election, preſerving, and curing of all ſorts of Wines, becauſe they be uſual charges under her hands, and by the leaſt neg-

neglect must turn the Husband to much losse: therefore to speak first of the election of sweet Wines, the must be carefull that her Malmsey be full Winch, pleasant, well hewed and fine: that *Bastard* be fat, and if it be tawny it skils not; for the tawney *Bastards* be alwayes the sweetest. Muskadine must be great, pleasant and strong with a sweet sent, and with Amber colour. Sack if it be Serea (as it should be) you shall know it by the mark of a cork burned on one side of the bung, and they be ever full gage, and so are no other Sacks, and the longer they lye, the better they be.

To make Muskadine, and give it a flaver

Take a pleasant But of Malmsey, and draw it out a quarter and more; then fill it up with fat *Bastard* within eight gallons or thereabouts, and parel it with six Eggs, yolks and all, one handfull of bay salt, and a pint of conduit water to every parel, and if the Wine be of high colour, put in three gallons of new milk, but skimme off the cream first, and beat it well: or otherwise, if you have a good But of *Malmsey*, and a good Pipe of *Bastard* you must take some empty But or Pipe, and draw thirty gallons of *Malmsey*, and as many of *Bastard*, and beat them all well together; and when you have so done, take a quarter of a pound of Ginger, and bruise it and put it into your vessel, then fill it up with *Malmsey* and *Bastard*: Or otherwise thus, if you have a pleasant But of *Malmsey* which is called Ralt mow, you may draw out of it forty Gallons; and if your *Bastard* be very faint, then thirty Gallons of it will serve to make it pleasant: then take four gallons of new milk, and beat it, and put it into it when it lacketh of twelve gallons of full, and then make your flaver.

How to flaver Muskadine.

Take an ounce of Corianders, of bay Salt, of Cloves, of each as much, one handfull of Savory: let all these be blended, and bruised together, and sow them close in a bagge, and take halfe a pint of Dammask water, and lay your flaver into it, and then put it into your But, and if it fine give it a parrel, and then fill it up, and let it lye till it fine: or else thus, take Coriander Rootes a penney-worth, one pound of Anniseeds, one penney-worth in Ginger, bruise them together, and put them into a bagge as before, and make your bagge long and small, that it go in and

our

out at the bung-hole, and when you do put it in, faſten it with a thread at the bung; then take a pint of the ſtrongeſt Dammaſk water, and warme it luke warme, then put it into the Butt, and then ſtoppe it cloſe for two or three dayes at leaſt; and then, if you pleaſe, you may ſet it a-broach.

To apparel Muskadine when it comes new to be find in twenty four hours.

Take ſeven whites of new laid Eggs, two handfulls of Bay-ſalt, and beat them well together, and put therein a pint of Sack or more, and beat them till they be as ſhort as Snow; then over-draw the But ſeven or eight Gallons, and beat the Wine, and ſtirre the Lees, and then put in the parel, and beat it, and ſo fill it up, and ſtop it cloſe, and draw it on the morrow.

To make white baſtard.

Draw out of a Pipe of *Baſtard* ten Gallons, and put to it five Gallons of new milk, and ſkimme it as before, and all to beat it with the parel of eight whites of Eggs, and a handfull of Bay ſalt, and a pint of Conduit water, and it will be white and fine in the morning. But if you will make very fine *Baſtard*, take a White wine Hogges-head, and put out the Lees, and waſh it clean, and fill it half full, and half a quarter, and put it to four Gallons of new milk, and beat it well with the whites of five Eggs, and fil it up with White wine and Sack, and it will be white and fine.

How to help Baſtard being eager.

Take two Gallons of the beſt *ſtoned Honey*, and two Gallons of White wine, and boyl them in a fair panne, ſkimme it clean, and ſtrain it through a fair cloath that there be no motes in it: then put to it one ounce of *Corianders*, and one ounce of *Anniſeeds*, four or five *Orange-peeles* dry and beaten to powder: let them lye three dayes: then draw your *Baſtard* into a clean Pipe, then put in your honey with the reſt, and beat it well: then let it lye a week, and touch it not, after draw it at your pleaſure.

To make baſtard white, and to rid away Laggs.

If your *Baſtard* be fat and good, draw out forty Gallons, then you may fill it up with the Lagges of any kind of white wines or Sacks; then take five Gallons of new milke, and firſt take away the Cream, then ſtrain it through a clean cloth, and when your Pipe is three quarters full, put in your milk; then beat it very well, and fill it ſo, that it may lack fifteen Gallons, then

aparel

aparel it thus: take the whites onely of ten Egges, and beat them in a fair tray with *Bay ſalt* and *Conduit water*; then put it into the pipe and beat it well, and ſo fill it up, and let it ſtand open all night; and if you will keep it any while, you muſt on the morrow ſtop it cloſe, and to make the ſame drink like *Oſſey*, give it this flaver: take a pound of *Anniſeeds*, two pence in *Corianders*, two pence in *Ginger*, two pence in *Cloves*, two pence in *Grains*, two pence in long *Pepper*, and two pence in *Lycoras*; bruiſe all theſe together: then make two bagges of linnen cloth, long and ſmall, and put your ſpices into them, and put them into the pipe at the bung, making them faſt there with a thread, that it may ſink into the Wine, then ſtop it cloſe, and in two dayes you may broach it.

A remedy for baſtard if it prick.

Take and draw him from his Lees, if he have any, and put the Wine into a *Malmſey But* to the Lees of *Malmſey*, then put to the *Baſtard* that is in the *Malmſey But*, nigh three Gallons of the beſt *Wort* of a freſh tap, and then fill him up with *Baſtard* or *Malmſey*, or *Cute*, if you will; then aparel it thus: Firſt, *Parel him, and beat him with a ſtaff, and then take the whites of four new laid Eggs, and beat them with a handfull of ſalt till it be as ſhort as Moſſe, and then put a pint of running water therein, and ſo fill the Pipe up full, and lay a little ſtone on the bung, and ſet it abroach within four and twenty houres, if you will.*

If you have a good But of *Malmſey*, and a But or two of *Sack* that will not be drunk: for the *Sack* prepare ſome empty But or Pipe, and draw it more than half full of Sack: then fill it up with *Malmſey*, and when your But is full within a little, put into it three Gallons of *Spaniſh Cute*, the beſt that you can get; then beat it well, then take your Taſter, and ſee that it be deep coloured; then fill it up with Sack, and give it aparel, and beat it well; The aparel is this: Take the yolkes of ten Egges, and beat them in a clean baſon with a handfull of *Bay-ſalt*, and a quart of *Conduit water*, and beat them together with a little piece of *Birch*, and beat it till it be as ſhort as *Moſſe*, then draw five or ſix gallons out of your But; then beat it again, and then fill it up, and the next day it will be ready

to

to be drawn: this aparel wil ſerve both for *Muſcadine*, *Baſtard*, and for *Sack*.

To ſhift malmſey, and to rid away ill wines

If you have two principal Buts of *Malmſey*, you may make three good Buts with your Lagges of Claret and Sack, if you put two gallons of red Wine in a But, it will ſave the more *Cute*: then put two or three gallons of *Cute*, as you ſee cauſe; and if it be *Spaniſh Cute*, two gallons will go further than five gallons of *candy Cute*, but the *candy Cute* is more naturall for the *Malmſey*: alſo one But of good *Malmſey*, and a But of Sack that hath loſt his colour, will make two good Buts of *Malmſey*, with the more *Cute*; and when you have fil'd your buts within twelve gallons, then put in your *Cute*, and beat it halfe an hour and more: then put in your parel and let it lye.

If Sack want his colour.

Firſt, parel him as you did the *Baſtard*, and order him as ſhall be ſhewed you for the *white Wine* of *Gaſcoigne* with *milke*, and ſo ſet him abroach.

For Sack that is tawny.

If your *Sack* have a ſtrong Lee or taſte, take a good ſweet But, fair waſhed, and draw your *Sack* into it, and make unto it a parel, as you do to the *Baſtard*, and beat it very well, and ſo ſtop up your But: and if it be tawny, take three gallons of new *milke*, and ſtrain it clean, and put it into your *Sack*, then beat it very well, and ſtop it cloſe.

For Sack that doth rape and is brown.

Take a fair empty But with the Lees in it, and draw your *Sack* into the ſame from his Lees fine: then take a pound of *Rice flowre*, as fine as you can get, and four graines of *Camphire*, and put it into the *Sacke*; and if it will not fine, give it a good parel, and beat it well: then ſtop it, and let it lye.

To colour ſack or any white wine.

If any of your *Sacks* or *white Wines* have loſt their colour, take three gallons of *new milke*, and take away the Creame: then over-draw your Wine five or ſix gallons; then put in your *milke* and beat it; then lay it a fore-taree all night, and in the morning lay it up, and the next day (if you will) you may ſet it abroach.

If Alligant be grown hard.

Draw him out in freſh Lee, and take three or four Gallons of *ſtone-honey* clarified, and being coole, put it in, and parel it with the yolkes of foure Egges, whites and all, and beat it well,

well, and fill it up, and ſtop it cloſe; and it will be pleaſant and quick as long as it is in drawing.

Take three Gallons of white Honey, and two Gallons of Red Wine, boyle them together in a faire pan, and skim it cleane, and let it ſtand till it be fine and cold, then put it into your Pipe, yet nothing but the fineſt; then beat it well, and fill it up, and ſtop it cloſe, and if your Alligant be pleaſant and great, it will doe much good, for that one Pipe will rid away divers. For Alligant that is ſour.

There are two ſorts of Rheniſh wines, that is to ſay, *Elſtertune* and *Barabant*: the *Elſtertune* are the beſt, you ſhall know it by the Fat, for it is double bard, and double pinned; the *Barabin* is nothing ſo good, and there is not ſo much good to be done with them as with the other. If the wines be good and pleaſant, a man may rid away a hogſhead or two of white Wine, and this is the moſt vantage a man can have by them: and if it be ſlender and hard, then take three or foure gallons of ſtone-honey, and clariſie it clean; then put into the honey, foure or five gallons of the ſame Wine, and then let it ſeeth a great while, and put into it two pence in Cloves bruiſed, let them ſeeth together, for it will take away the ſent of honey, and when it is ſodden take it off, and ſet it by, till it be thorow cold; then take four gallons of milk and order it as before, and then put all into your Wine, and all to beat it; and (if you can) role it, for that is the beſt way: then ſtop it cloſe, and let it lye, and that will make it pleaſant. How to order Rheniſh wines

The Wines that be made in *Burdeaux* are called *Gaſcoine* Wine, and you ſhall know them by their hazell hoope, and they muſt be full gage, and ſound Wines. Of what countryes wines are by their names.

The Wines of the high Countries, and which are called high Countrey Wines, are made ſome thirty or fourty miles beyond *Burdeaux*, and they come not down ſo ſoon as the other, for if they do, they are all forfeited; and you ſhall know them ever by their hazell hoops, and the length gage lacks.

Then have you Wines that be called *Galloway*, both in Pipes and Hogſheads, and be long, and lack two Cefterns in gage and a half, and the wines themſelves are high coloured. Then there are other Wines which are called white Wine of *Angulle*, very

very good Wine, and lacks little of gage, and that is alſo in pipes for the moſt part, and is quarter bound. Then there are *Rochell* wines, which are alſo in pipes long and ſlender: they are very ſmall hedge wines, ſharp in Taſte, and of a pallid complexion. Your beſt Sacks are of *Seres* in *Spain*, your ſmaller of *Galicia* and *Portugall*: your ſtrong Sacks are of the Iſlands of the *Canaries*, and of *Malligo*, and your Muskadine and Malmeſeys are of many parts of *Italy*, *Greece*, and ſome ſpeciall Iſlands.

Every Terſe is in depth the middle of the knot in the midſt.

The depth of every Hogſhead is the fourth prick above the knot.

The depth of every Puncheon is the fourth prick next to the punchener.

The depth of every Sack-but is the four pricks next to the puncheon.

Notes of gaging of wines, oyles, and liquors.

The depth of the half Hogſhead is at the loweſt notch, and accounted one.

The depth of the half Terſe is at the ſecond notch, and is accounted two.

The depth of the half Hogſhead and half Pipe, is at the third notch, and accounted three.

The depth of the halfe-But is at the fourth notch, and is accounted four.

1. *The*

1. *The first gage is marked thus.*



2. *The halfe Seſtern lacketh thus.*



3. *The whole Seſtern lacketh thus.*



4. *The Seſtern and half lag.*



5. *The two Seſterns, thus.*



6. *The two and halfe Seſterns, thus.*



The contents of all manner of Gaſcoine Wine, and others.

A But of Malmſey, if he be full gage, is one hundred and twenty ſix gallons.

And the Tun is two hundred and fifty two gallons. Every Seſtern is three gallons.

If you ſell for twelve pence a gallon, the Tun is twelve pound, twelve ſhillings.

And Malmſey and Rheniſh wine at ten pence the gallon, is the Tun ten pound.

Eight pence the gallon, is the Tun eight pounds.

Six pence the gallon, is the Tun ſix pounds.

Five pence the gallon, is the Tun five pounds.

Four pence the gallon, is the Tun four pounds.

Now for Gaſcoine Wine, there goeth foure Hogſheads to a Tun, and every Hogſhead is ſixty three gallons, the two hogſheads one hundred twenty ſix gallons; and four hogſheads are two hundred fifty two gallons; and if you ſell for eight pence the gallon, you ſhall make of the Tun eight pounds, and ſo forth: look how many pence the gallons are, and ſo many pounds the Tun is.

Now for baſtard, it is the ſame rate, but it lacketh of gage two Seſterns and a half, or three at a pipe, and then you muſt abate ſix gallons of the price, and ſo in all other wines.

To chuſe Gaſcoine wines.

See that in your choiſe of Gaſcoine wines, you obſerve, that your Claret wines be faire coloured, and bright as a Ruby, not deep as an Amethyſt; for though it may ſhew ſtrength, yet it wanteth neatneſſe: alſo let it be ſweet as a Roſe or a Violet, and in any caſe let it be ſhort, for if it be long, then in no caſe meddle with it.

For your white Wines, ſee they be ſweet and pleaſant at the Noſe, very ſhort, clear and bright, and quick in the Taſte.

Laſtly, for your Red Wine, provided that they be deep coloured, and pleaſant, long, and ſweet, and if in them or Claret wine be any default of colour, there are remedies enow to amend and repair them.

To remedy Claret wine that hath loſt his colour.

If your Claret wine be faint, and have loſt his colour; then take a freſh Hogſhead with his freſh Lees, which was very good wine, and draw your wine into the ſame; then ſtop it

it close and right, and lay it a fore-take for two or three dayes that the Lees may run through it; then lay it up till it be fine, and if the colour be not perfit, draw it into a Red Wine Hogshead, that is new drawn with the Lees, and that will colour of himselfe, and make him strong: or take a pound of Tournsoll or two, and beat it with a gallon or two of wine, and let it lye a day or two; then put it into your hogshead, draw your Wine againe, and wash your cloths; then lay it a fore-take all night, and roule it on the morrow; then lay it up, and it will have a perfit colour.

And if your Claret Wine have lost his colour, take a penny worth of Damsens, or else black bulleſſes, as you see cause; and stew them with some Red wine of the deepest colour, and make thereof a pound or more of sirrop, and put it into a clean glasse, and after into the hogshead of Claret wine: and the same you may likewise do unto red Wine if you please.

And if your white Wine be faint, and have lost his colour, if the wine have any strength in it, take to a hogshead so much as you intend to put in, out of the said milk, and a handfull of Rice beaten very well, and a little Salt; and lay him a fore-take all night, and on the morning lay him up againe, and set it abroach in any wise the next wine you spend, for it will not last long. A remedy for white wine that hath lost his colour.

Take three Gallons of new milk, and take away the Cream off it; then draw five or six gallons of wine, and put your milk into the hogshead, and beat it exceeding well, then fill it up, but before you fill it up, if you can roule it; and if it be long and small, take half a pound of Roch Allum finely beaten into powder, and put into the vessel, and let it lye. For white wine that hath lost his colour.

Take and draw it into new Lees of the owne nature, and then take a dozen of new pippins, and pare them, and take away the cores, and then put them in; and if that will not serve, take a handful of the Oake of Jerusalem, and stamp it, then put it into your Wine, and beat it exceeding well, and it will not only take away the foulnesse, but also make it have a good sent at the nose. A remedy for Claret that drinks foul.

If your red Wine drink faint, then take a hogshead that Allegant hath been in with the Lees also, and draw your Wine in-

to it. and that will refreſh it well, and make the wine well coloured; or otherwiſe, draw it cloſe to freſh lees, and that will recover it again, and put to it three or four gallons of Allegant, and turn it on his lees.

If your Red wine lack colour, then take out four gallons, and put in four gallons of Allegant, and turn him on his lees, and the bung up, and his colour will return and be fair.

Take a good But of Malmſey, and over-draw it a quarter or more, and fill him up with fat Baſtard, and with Cute a gallon and more, then parrell him as you did your Malmſey.

If *Oſſey* compleat hath loſt his colour.

You ſhall in all points dreſſe him, as you did dreſſe your Sack, or White Wine in the like caſe, and parrel him, and then ſet him abroach. And thus much touching Wines of all ſorts, and the true uſe and ordering of them ſo far forth as belongeth to the knowledge and profit of our Engliſh Houſewife.

CHAP. V.

Of Wool, Hempe, Flax, and Cloath, and dying of Colours, of each ſeverall ſubſtance, with all the knowledges belonging thereto.

OUr Engliſh Houſ-wife, after her knowledge of preſerving and feeding her Family, muſt learn alſo how, out of her owne indeavours, ſhe ought to cloath them outwardly and inwardly: outwardly for defence from the cold and comelineſſe to the perſon; and inwardly, for cleanlineſs and neatneſſe of the skin, whereby it may be kept from the filth of ſweat or vermine; the firſt conſiſting of woollen cloth, the latter of linnen.

Of making woollen cloth.

To ſpeak then firſt of the making of woollen cloth, it is the office of a Husbandman at the ſheering of his ſheep, to beſtow upon the Houſe-wife ſuch a competent proportion of wool, as ſhall be convenient for the clothing of his Family, which Wool as ſoon as ſhe hath received it, ſhe ſhall open, and with a pair of ſheeres, (the fleece lying as it were whole before her)

ſhe

ſhe ſhall cut away all the coorſe locks, pitch, brands, tard-locks, and other feltrings, and lay them by themſelves for coorſe Coverlids, or the like; then the reſt ſo clenſed, ſhe ſhall break into pieces, and toaſe it every lock by lock, that is, with her hands open, and ſo divide the wool, as not any part thereof may be feltred or cloſe together, but all open and looſe; then ſo much of the Wool as ſhe intends to ſpin white, ſhe ſhall put by it ſelfe, and the reſt which ſhe intends to put into colours, ſhe ſhall waigh up, and divide into ſeverall quantities, according to the proportion of the web which ſhe intends to make, and put every one of them into particular bags, made of netting, with tallies, or little pieces of wood fixed unto them, with privy marks thereon, both for the weight, the colour, and the knowledge of the ſame wool, when the firſt colour is altered: this done, ſhe ſhall if ſhe pleaſe ſend them unto the Diers, to be died after her own fancy; yet foraſmuch, as I would not have our Engliſh Houſe-Wife ignorant in any thing meet for her knowledge, I will ſhew her here, before I proceed any further, how ſhe ſhall dye her wool her ſelfe, into any colour meet for her uſe.

To dye wool black.

Firſt, then to dye wool black, you ſhall take two pound of Galls, and bruiſe them, then take halfe ſo much of the beſt green Coperas, and boyl them both together in two gallons of running water: then ſhall you put your wool therein, and boyl it; ſo done, take it forth and dry it.

To dye wool of a haire colour.

If you will dye your wool of a bright haire colour: firſt boyl your wool in Allum and Water, then take it forth and when it is cold, take Chamber-lye, and Chimney-ſoot, and mixing them together well, boyle your wool again therein, and ſtirre it exceeding well about, then take it forth, and lay it where it may conveniently dry.

To dye wool red.

If you will dye your wool into a perfect Red colour, ſet on a pan full of water; when it is hot, put in a peck of wheat bran, and let it boyl a little, then put it into a Tub, and put twice as much cold water unto it, and let it ſtand untill it be a week old: having done ſo, then ſhall you put to ten pounds of wool, a pound of Allum; then heate your liquor again, and put in your Allum, and ſo ſoone as it is melted, put in your wool,

and let it boyl the ſpace of an houre; Then take it again, and then ſet on more bran and water.

Then take a pound of Madder, and put in your Madder when the Liquor is hot: when the Madder is broken, put in the wool and open it, and when it commeth to be very hot, then ſtir it with a ſtaffe, and then take it out, and waſh it with fair water; then ſet on the pan again with fair water, and then take a pound of Saradine buck, and put it therein, and let it boyl the ſpace of an Egge ſeething; then put in the wool, and ſtirre it three or foure times about, and open it well, and after dry it.

To dye wool blew. To dye wool blew, take good ſtore of old chamberlye, and ſet it on the fire, then take half a pound of blew Neale, Byſe, or Indico, and beat it ſmall in a Morter, and then put it into the Lye, and when it ſeeths put in your wool.

To dye a puke. To dye wool of a puke colour, take Galls, and beat them very ſmall in a Morter, put them into fair ſeething water, and boyle your wool or your Cloth therein, and boyle them the ſpace of halfe an hour: then take them up, and put in your Coperas into the ſame Liquor, then put in your wool again, and doing this once or twice, it will be ſufficient.

To dye a Cinder colour. And if you will dye your wool of a Cinder colour, which is a very good colour, you ſhall put your Red wool into your puke Liquor; and then it will faile leſſe to be of a Cinder colour.

To dye green or yellow. If you will dye your wool either green or yellow, then boyle your Wood-ward in a faire water, then put in your wool or Cloth, and the wool which you put in white, will be yellow, and that wool which you put in blew, will be green, and all this with one Liquor: provided that each be firſt boyled in Allom.

When you have thus dyed your wool, into thoſe ſeverall colours, meet for your purpoſe, and have alſo dryed it well; then you ſhall take it forth, and toaſe it over againe as you did before: for the firſt toaſing was to make it receive the colour or dye: this ſecond is to receive the oyle, and make it fit for ſpinning; which as ſoon as you have done, you ſhall mixe your colours together: wherein you are to note that the beſt medly

medly is that which is compounded of two colours onely, as a light colour and a dark : for to have more is but confuſion, and breeds no pleaſure but diſtraction to the ſight : therefore for the proportion of your mixtures, you ſhall ever take two parts of the darker colour, and but a third part of the light. As for example, your web contains twelve pound, and the colours are red and greene : you ſhall then take eight pound of the green wool, and but four pound of the red ; and ſo of any other colours where there is difference in brightneſſe. The mixing of colours.

But if it be ſo that you would needs have your cloath of three Colours, as of two dark and one light, or two light and one dark : As thus, you will have Crimſon, Yellow, and Puke : you ſhall take of the Crimſon and Yellow of each two pound, and of the Puke eight pound : for this is two light colours to one dark : but if you will take a Puke, a Green and an Orange tawny, which is two dark, and one light ; then you ſhall take of the Puke and green, and the orange tawny, of each alike quantity ; that is to ſay, of either four pounds. When you have equally divided your portions, then you ſhall ſpread upon the ground a ſheet, and upon the ſame firſt lay a thinne layr or bed of your darker colour, all of one even thickneſſe, then upon the ſame layr, lay another much thinner of the brighter quantity, being ſo neer as you gueſſe it, hardly half ſo much as the darker : then cover it over with another layr of the ſad colour or colours again ; then upon it another of the bright again : And thus lay layr upon layr till all your wool be ſpread ; then beginning at one end to role up round and hard together the whole bed of wool ; and then cauſing one to kneel hard upon the roul, that it may not ſtir nor open, with your hands touze and pull out all the wool in ſmall pieces ; And then taking a pair of Stock cards ſharp and large, and bound faſt to a form, or ſuch like thing ; and on the ſame, Comb and Card all over the Wool, till you ſee it perfectly and undiſtinctly mixed together, and that indeed it is become one intire colour of divers, without ſpots, or undivided locks or knots ; in which doing you ſhall be very carefull and heedfull with your eye ; and if you find any hard knot or other felter in the Wool, which will not open, though it be never ſo Making of three colours.

ſmall, yet you ſhall pick it out, and open, it or elſe being any other fault, caſt it away; for it is the greateſt Art in Houſe-wifery to mixe theſe Wools aright, and to make the Cloth without blemiſh.

Of the oyling of Wool.

Your Wool being thus mixed perfectly together, you ſhall then oyl it, or as the plain Houſe-wife tearmes it, greaſe it, in this manner: being laid in a round flat bed, you ſhall take of the beſt Rape oyl, or for want thereof, either well clarified Gooſe-greaſe, or Swines-greaſe, and having melted it, with your hand ſprinkle it all over your wool, and work it very well into the ſame; then turn your wooll about, and do as much on the other ſide, till you have oyled all the Wool over, and that there is not a lock which is not moyſtned with the ſame.

The quantity of oyl.

Now for as much as if you ſhall put too much oyle upon the Wool, you may thereby do great hurt to the Web, and make that the thread will not draw, but fall into many pieces, you ſhall therefore be ſure at the firſt to give it little enough; and taking ſome thereof, prove it upon the Wheel: And if you ſee it draw dry, and breaketh, then you may put more oyl unto it; but if it draw well, then to keep it there without any alteration. But becauſe you ſhall be a little more certain in the truth of your proportions, you ſhall know, that three pounds of greaſe or oyle, will ſufficiently annoynt or greaſe ten pounds of Wool; and ſo according to that proportion, you may oyl what quantity you will.

Of tumming wool.

After your Wool is oyl'd and annoynted thus, you ſhall then tum it, which is, you ſhall put it forth as you did before when you mixed it, and card it over again upon your Stock cards: and then thoſe Cardings which you ſtrike off, are called tummings, which you ſhall lay by, till it come to a ſpinning. There be ſome Houſ wifes which oyl it as they mixe it, and ſprinkle every layr as they lay it, and work the oyle into it; and then rouling up as before ſaid, pul it out and tum it; ſo that then it goeth but once over the Stock-cards, which is not amiſſe; yet the other is more certain, though ſomewhat painfull.

Of ſpinning wool.

After your wool is thus mixed, oyled, and tummed, you ſhal

ſhall then ſpinne it upon great Wool-wheels, acording to the order of good Houſewifery: the actions whereof muſt be got by practice, and not relation; only this, you ſhall be carefull to draw your thread according to the nature and goodneſſe of your wool, not according to your particular deſire; for if you draw a fine thread from a wool which is of a coorſe ſtaple, it will want ſubſtance when it comes to the Walk mil, or either there beat in pieces, or not being able to bed, and cover the threads well, be a cloath of a very ſhort laſting. So likewiſe if you draw a coorſe thread from a Wool of a fine ſtaple, it will then ſo much over-thick, that you muſt either take away a great part of the ſubſtance of your wool in flocks; or elſe let the cloth wear coorſe and high, to the diſgrace of the good Houſwifery, and loſſe of much cloth, which elſe might have been ſaved.

Now for the diverſities of ſpinning, although our ordinary Engliſh Houſ-wife make none at all, but ſpin every thread alike, yet the better experienc'd make two manner of ſpinnings, and two ſorts of thread; the one they call warp, the other weft; or elſe wooffe; warp is ſpun cloſe, round and hard twiſted, being ſtrong and well ſmoothed, becauſe it runs through the ſleies, and alſo indureth the fretting and beating of the beam; the weft is ſpun open, looſe, hollow, and but halfe twiſted; neither ſmoothed with the hand, nor made of any great ſtrength, becauſe it only croſſeth the warp, without any violent ſtraining, and by reaſon of the ſoftneſſe thereof beddeth cloſer, and covereth the warb ſo well, that a very little beating in the mill, bringeth it to a perfect cloth: and though ſome hold it leſſe ſubſtantial than the web, which is all of twiſted yarn, yet experience finds they are deceived, and that this open weft keeps the cloth longer from fretting and wearing. The diverſities of ſpinning.

After the ſpinning of your wool, ſome Houſwifes uſe to wind it from the broch into round clews for more eaſe in the warping, but it is a labour may very well be ſaved, and you may as well warp it from the broch as from the clew, as long as you know the certain weight, for by that only you are to be directed in all manner of cloth walking. Winding of woollen yarn.

Of warping cloth.

Now as touching the warping of cloth, which is both the skil and action of the Weaver, yet muſt not our Engliſh Houſe-wife be ignorant therein, but though the doing of the thing be not proper unto her, yet what is done muſt not be beyond her Knowledge, both to bridle the falſhood of unconſcionable Workmen, and for her own ſatisfaction, when ſhe is rid of the doubt of anothers evil doing. It is neceſſary then that ſhe firſt caſt, by the weight of her Wool, to know to how many yards of cloth the Web will ariſe; for if the Wool be of a reaſonable good ſtaple, and well ſpun, it will run yard and pound, but if it be coorſe, it will not run ſo much.

Now in your warping alſo, you muſt look how many pounds you lay in your warp, and ſo many you muſt neceſſarily preſerve for your weft: For Houſ-wifes ſay, the beſt cloth is made of even and even; for to drive it to greater advantage is hurtful to the cloth. There be other obſervations in the warping of cloth; as to number your Portuſſes, and how many goes to a yard: to look to the cloſeneſſe and filling of the ſtrie, and ſuch like, which ſometimes hold, and ſometimes fail, according to the art of the workman; and therefore I will not ſtand much upon them, but refer the Houſwife to the inſtruction of her own experience.

Of weaving of cloth, walking and dreſſing it.

Now after your cloth is thus warped, and delivered up into the hands of the Weaver, the Houſ-wife hath finiſht her labour; for in the Weaving, walking, and dreſſing thereof, ſhe can challenge no property more than to entreat them ſeverally to diſcharge their duties with a good conſcience; that is to ſay, that the Weaver weave cloſe, ſtrong, and true, that the Walker or Fuller mill it carefully, and looke well to his ſcowring earth, for fear of beating holes into the cloth; and that the Cloth worker or Sheer man burle and dreſſe it ſufficiently, neither cutting the Wool too unreaſonable high, whereby the cloth may not wear rough, nor too low, leſt it appear thred bare ere it come out of the hands of the Taylor.

Of linnen cloth.

Theſe things fore warn'd and performed, the cloth is then to be uſed at your pleaſure.

The next thing to this, which our Engliſh Houſwife muſt be

be skilful in, is the making of all ſorts of Linnen cloth, whether it be of Hemp or Flaxe; for from thoſe two onely is the moſt principal cloth derived and made, both in this and in other Nations.

And firſt touching the Soyl fitteſt to ſow Hemp upon, it must be a rich mingled earth of Clay and Sand, or Clay, and Gravel well tempered; and of theſe the beſt ſerveth beſt for that purpoſe; for the ſimple Clay, or the ſimple Sand are nothing ſo good; for the firſt is too tough, too rich, and too heavy, bringeth forth all Bun, and no Rind; the other is too barren, too hot, and too light, and bringeth forth ſuch ſlender withered increaſe, that it is nothing neer worth the labour. Briefly, then the beſt Earth is the mixt ground, which the Husbandman calls the red hazel ground, being wel-ordered and manur'd; and of this earth a principal place to ſow Hemp on, is in old Stack-yards, or other places kept in the Winter time for the lair of Sheep or Cattel, when your ground is either ſcarce, or formerly not imployed to that purpoſe; but if it be where the ground is plenty, and onely uſed thereunto, as in *Holland* in *Lincolnſhire*, the Iſle of *Axom*, and ſuch like places, then the cuſtome of the Country will make you expert enough therein: There be ſome that will preſerve the ends of their Corn-lands, which but upon graſſe, to ſow Hemp or Flax thereon, and for that purpoſe will manure it well with ſheep; for whereas Corn which butteth on graſſe hads, where cattle are teathered, is commonly deſtroyed, and no profit iſſuing from a good part thereof; by this means, that which is ſown will be more ſafe and plentiful, and that which was deſtroyed, will bear a commodity of better value. The ground beſt to ſow Hemp on.

Now for the tillage or ordering of the ground where you ſow Hemp or Flax, it would in all poynts be like that where you ſow Barley, or at the leaſt as often broke up, as you do when you ſow Fallow wheat; which is thrice at leaſt, except it be ſome very mellow and ripe mould, as ſtack yards, and uſual Hemp Lands be, and then twice breaking up is ſufficient: that is to ſay, about the latter end of *February*, and the latter end of *April*, at which time you ſhall ſow it: and herein. The tillage of the ground.

herein it is to be noted, that you muſt ſow it reaſonable thick with good ſound and perfect ſeed, of which the ſmootheſt, roundeſt, and brighteſt, with leaſt duſt in it, is beſt: you muſt not lay it too deep in the earth: but you muſt cover it cloſe, light, and with ſo fine a mould as you can poſſible break with your harrows, clotting beetles, or ſleighting: then till you ſee it appear above the earth, you muſt have it exceedingly carefully tended, eſpecially an hour or two before the Sun riſe, and as much before its ſet; for birds and other vermine, will otherwiſe pick the ſeed out of the earth, and ſo deceive you of your profit.

Of weeding of Hemp and Flax.

Now for the weeding of Hemp, you may ſave the labour, becauſe it is naturally of it ſelf ſwift of growth, rough, and venemous to any thing that grows under it, and will ſooner of its own accord deſtroy thoſe unwholſome weeds, than by your labour. But for your Flax or Line, which is a great deal more tender, and of harder increaſe, you ſhall as occaſion ſerveth weed it, and trim it, eſpecially if the weeds overgrow it, but not otherwiſe: for if it once get above the weeds, then it will ſave it ſelf.

The pulling of Hemp or Flax.

Touching the pulling of Hemp, or Flax, which is the manner of gathering of the ſame; you ſhall underſtand that it muſt be pulled up by the roots, and not cut as Corn is, either with ſithe or hook; and the beſt time for the pulling of the ſame is, when you ſee the leaves fall downward, or turne yellow at the tops, for that is full ripe; and this for the moſt part will be in *July*, and about *Mary Maudlins* day. I ſpeak now touching the pulling of Hemp for cloth: but if you intend to ſave any for ſeed, then you ſhall ſave the principal buns, and let them ſtand till it be the latter end of *Auguſt* or ſometime till mid *September* following; and then ſeeing the ſeed turned brown and hard, you may gather it, for if it ſtand longer, it will ſhed ſufficiently; as for Flaxe, which ripeneth a little after the Hempe, you ſhall pull it as ſoon as you ſee the ſeed turn brown, and bend the head to the earth-ward, for it will afterward ripen of it ſelf as the bun dryeth.

Now for the ripening and ſeaſoning of Hemp or Flax, you ſhall

ſhall ſo ſoon as you have pulled it, lay it all along flat, and thinne upon the ground, for a day and a night at the moſt, and no more; and then as Houſe-wifes call it, tye it up in baits, and rear them upright till you can conveniently carry it to the water, which would be done as ſpeedily as may be. Now there be ſome which do ripen their Hemp and Flaxe upon the ground where it grew, by letting it lye thereon to receive dews and raine, and the moyſtneſſe of the earth, till it be ripe: but this is a vile and naughty way of ripening, it maketh the Hemp or Flaxe black, rough, and often rotten: therefore I would wiſh none to uſe it, but ſuch as neceſſity compelleth thereunto, and then to be careſull to the often turning thereof, for it is the ground onely which rots it.

Now for the watering of the Hemp or Flax, the beſt water is the running ſtream, and the worſt the ſtanding pit, yet becauſe Hemp is a poyſonous thing, and infecteth the water, and deſtroyeth all kind of fiſh, it is more fit to imploy ſuch pits and ditches as are leaſt ſubject to annoyance, except you live neer ſome great broad and ſwift ſtreams, and then in the ſhallow parts thereof you may water without danger. Touching the manner of the watering thereof, you ſhall according to the quantity knock four or ſix ſtrong ſtakes into the bottome of the water, and ſet them ſquare wiſe, then lay your round baits or bundles of Hemp down under the water, the thick end of your bundle one way, and the thick end of another bundle another way; and ſo lay bait upon bait, till you have laid in all, and that the water covereth them all over; then you ſhal take over-lyers of wood, and binding them over-thwart to the ſtakes, keep the Hemp down cloſe, and eſpecially, at the four corners; then take great ſtones, gravel, and other heavy rubbiſh, and lay it between, and over the over-lyers, and ſo cover the Hemp cloſe, that it may by no means ſtir, and ſo let it continue in the water four dayes and nights; if it be in a running water; but if it be in a ſtanding water, then longer, and then take out one of the uppermoſt baits and waſh it; and if in the waſhing you ſee the leaf come off, then you may be aſſured the Hemp is watered enough: as for Flax, leſs time will ſerve it, and it will ſhed the leaf in three nights. The watering of Hemp or Flax.

When

Of waſhing out of Hemp or Flax.

When your Hemp or Flax is thus watered enough, you ſhall take off the gravel, ſtones, over-lyers of wood, and unlooſing it from the ſtakes, take and waſh out every bait or bundle ſeverally by it ſelf, and rub it exceeding clean, leaving not a leaf upon it, nor any filth within it; then ſet it upon the dry earth upright, that the water may drop from it, which done, load it up, and carry it home; and in ſome open cloſe, or piece of ground rear it upright, either againſt hedges, pales, walls, back-ſides of houſes, or ſuch like, where it may have the full ſtrength or reflection of the Sun, and being throughly dryed then houſe it; yet there be ſome Houſe-wifes which as ſoon as their Hemp comes from the water, will not rear it upright, but lay it upon the ground flat and thin for the ſpace of a ſennight, turning it at the end of every two dayes, firſt on the one ſide, then on the other, and then after rear it upright, dry it, and ſo houſe it: and this Houſewifery is good and orderly.

Now although I have hitherto joyned Hemp and flax together, yet you ſhall underſtand that there are ſome particular differences between them; for whereas your Hemp may within a night or two after the pulling, be carried to the water, your flax may not, but muſt be reared up, and dryed and withered a week or more to ripen the ſeed, which done, you muſt take ripple combs, and ripple your flax over, which is the beating or breaking off from the ſtalks the round bells or bobs which contain the ſeed, which you muſt preſerve in ſome dry veſſel or place till the ſpring of the year, and then beat it, or threſh it for your uſe, and when your flax or line is ripled, then you muſt ſend it to the water as aforeſaid.

After your Hemp or Flax hath been watered, dryed, and houſed, you may then at your pleaſure break it, which is in a brake of wood (whoſe proportion is ſo ordinary, that every one almoſt knows them) then breake and beat out the dry bun or hexe of the Hemp or Flax from the rind which covers it, and when you brake either, you ſhall do it as neer as you can, on a fair dry Sun-ſhine day, obſerving to ſet forth your Hemp and Flax, and ſpread it thin before the Sun, that it may be as dry as tinder before it come to the brake; for if either

either in the lying close together, it shall give again or sweat, or through the moystnesse of the ayre, or place where it lyes, receives any dampishnesse: you must necessarily receive it dried sufficiently again, or else it will never brake well, nor the bun break and fall from the rinde in order as it should.

The drying of hemp or flax.

Therefore, if the weather be not seasonable, and your need much to use your Hemp or Flaxe, you shall then spread it upon your Kilne, and making a soft fire under it, dry it upon the same, and then brake it: yet for as much as this is oft times dangerous, and much hurt hath been received thereby through casualty of fire, I would wish you to stick four stakes in the earth at least five foot above ground, and laying over them small over-layers of wood, and open fleaks or hurdles upon the same; spread your Hemp, and also rear some round about it all, but at one open side; then with straw, small shavings, or other light dry wood make a soft fire under the same, and so dry it, and brake it, and this without all danger or mistrust of evill; and as you brake it, you shall open and look into it, ever beginning to break the root ends first; and when you see the bun is sufficiently crusht, fallen away, or at the most hangeth but in very small shivers within the Hemp or Flax, then you shall say, it is brak't enough, and then terming that which you called a Baite or Bundle before, now a strike, you shall lay them together, and so house them, keeping in your memory either by score or writing, how many strikes of Hemp, and how many strikes of Flaxe you brake up every day.

Diversity of brakes.

Now that your Hemp or Flax may brake so much the better, you must have for each severall sort two severall brakes, which is an open and wide toothed, or nickt brake, and a close and straight toothed brake: the first being to crush the bun, and the latter to beat it forth. Now for Flax, you must take first that which is the straighter for the Hempe, and then after, one of purpose, much straighter and sharper; for the bun of it being more small, tough, and thin, must necessarily be broken into much lesse pieces.

After your Hemp and Flax is brak't, you shall then swingle it, which is upon a swingle-tree block, made of an half inch boord

boord about four foot above ground, and ſet upon a ſtrong foot or ſtock, that will not eaſily move and ſtir, as you may ſee in any Houſe-wives houſe whatſoever, better than my words can expreſſe: and with a piece of wood called the ſwingle-tree dagger, made in the ſhape and proportion of an old dagger, with a reaſonable blunt edge; you ſhall beat out all the looſe buns and ſhivers that hang in the hemp or flaxe, opening and turning it from one end to the other, till you have no bun or ſhiver to be perceived therein, and then ſtriking a twiſt, and fould in the midſt, which is ever the thickeſt part of the ſtrike, lay them by till you have ſwingled all; the generall profit whereof, is not only the beating out of the hard bun, but alſo an opening and ſoftning of the tear, whereby it is prepared and made ready for the Market.

Now after you have ſwingled your Hemp and Flaxe over once, you ſhall take and ſhape up the refuſe ſtuffe which you beat from the ſame ſeverally, and not only it, but the tops and knots, and half brackt bun, which fall from the brake alſo; and drying them againe, cauſe them to be very well threſht with flayls, and then mixing them with the refuſe which fell from the ſwingle tree, dreſſe them all well with threſhing and ſhaking, till the buns be clean driven out of them; and then lay them in ſome ſafe dry place till occaſion of uſe: theſe are called ſwingle-tree hurds, and that which comes from the Hemp will make window-cloth, and ſuch like coorſe ſtuff, and that which comes from the flax, being a little towed again in a pair of wool cards, will make a coorſe harding.

But to proceed forward in the making of cloth, after your hemp or flaxe hath been ſwingled once over, which is ſufficient for the market, and for ordinary ſale; you ſhall then for cloath, ſwingle it over the ſecond time, and as the firſt did beat away the bun, and ſoften the rind, ſo this ſhall break and divide, and prepare it fit for the heckle; and hurds which are this ſecond time beaten off, you ſhall alſo ſave: for that of the Hemp, (being toaſed in wool cards) will make a good hempen harding, and that which commeth from the flaxe (uſed in that manner) a flaxe harding, better than the former.

Of beating Hemp.

After the ſecond ſwingling of your Hemp, and that the hurds

hurds thereof have been laid by, you ſhall take the ſtrikes, and dividing them into dozens, and half dozens, make them up into great thick roles, and then as it were broaching them, or ſpitting them upon long ſticks, ſet them in the corner of ſome chimney, where they may receive the heat of the fire, and there let them abide, till they be dried exceedingly, then take them, and laying them in a round trough made for the purpoſe, ſo many as may conveniently lye therein, and there with beetles beat them exceedingly, till they handle both without and within as ſoft and pliant as may be, without any hardneſſe or roughneſſe to be felt or perceived; then take them from the trough and open the roler, and divide the ſtrikes ſeverally as at the firſt, and if any be inſufficiently beaten, role them up, and beat them over as before.

Of heckling Hemp.

When your Hemp hath been twice ſwingled, dried, and beaten, you ſhall then bring it to the heckle, which inſtrument needeth no demonſtration, becauſe it is hardly unknown to any woman whatſoever: and the firſt heckle ſhall be coorſe open and wide toothed, becauſe it is the firſt breaker or divider of the ſame, and the layer of the ſtrikes even and ſtraight: and the hurds which come of this heckling, you ſhall mixe with thoſe of the latter ſwingling, and it will make the cloth much better; then you ſhall heckle it the ſecond time through a good ſtraight heckle, made purpoſely for Hemp, and be ſure to break it very well, and ſufficiently thereupon, and ſave both the hurds by themſelves, and the ſtrikes by themſelves in ſeverall places.

Now there be ſome very principall good Houſe-wives, which uſe only but to heckle their hemp once over, affirming, that if it be ſufficiently dryed and beaten, that once going over thorough a ſtraight heckle, will ſerve without more loſſe of labour, having been twice ſwingled before.

Now if you intend to have an excellent piece of Hempen cloth, which ſhall equall a piece of very pure Linnen; then after you have beaten it, as before ſaid, and heckled it once over, you ſhall then roule it up againe, dry it as before, and beat it againe as much as at the firſt; then heckle it through a fine flaxen heckle, and the Towe which fals from the heckle, will make a principall hemping, but the teare it ſelfe a cloth as pure as fine Houſe-wifes Linnen, the indurance and laſting where-

of

of is rare and wonderfull: thus you ſee the uttermoſt art in dreſſing of hemp, for each ſeverall purpoſe in cloth-making, till it come to the ſpinning.

The dreſſing of flax to the fineſt uſe.

Flaxe after it hath been twice ſwingled, needeth neither more drying nor beating as hemp doth, but may be brought to the heckle in the ſame manner as you did hemp; onely the heckle muſt be much finer and ſtraighter; and as you did before, the firſt heckle being much coorſer than the latter, holding the ſtrike ſtiffe in your hand, break it very well upon that heckle: then the hurdes which comes thereof, you ſhall ſave to make fine hurden cloth of, and the ſtrike it ſelfe, you ſhall paſſe thorow a finer heckle; and the hurds, which come from thence, you ſhall ſave to make fine midlen cloth of, and the teare it ſelf for the beſt Linnen.

To dreſſe flax for the fineſt uſe that may be, as to make faire Holland cloth of great price, or thread for the moſt curious purpoſe, a ſecret hitherto, almoſt concealed from the beſt *Houſe-wifes* with us, you ſhall take your flax after it hath been handled, as is before ſhewed, and laying three ſtrikes together, plat them in a plat of three, ſo hard and cloſe together as is poſſible, joyning one to the end of another, till you have platted ſo much as you think convenient, and then begin another plat, and thus plat as many ſeverall plats as you think will make a roule, like unto one of your hemp roules before ſpoke of, and then wreathing them hard together, make up the roule; and ſo many roules more or leſſe, according to the purpoſe you dreſſe them for: this done, put the roules into a hempe-trough, and beat them ſoundly, rather more than leſſe than the hempe: and then open and unplat it, and divide every ſtrike from the other, very carefully; then heckle it through a finer heckle than any formerly uſed: for of heckles there be ever three ſorts, and this muſt be the fineſt: and in this heckling, you muſt be exceeding carefull to do it gently, lightly, and with good deliberation, leſt what you heckle from it ſhould run to knots, or other hardneſſe, as it is apt to do: but being done artificially as it ought, you ſhall ſee it look, and feel it handle like fine ſoft Cotton, or Jerſie wool; and this which thus looketh and feeleth, and falleth from the heckle, will notwithſtanding make a pure Linnen, and run at leaſt

leaſt two yards and a half in the pound; but the teare it ſelfe will make a perfect ſtrong, and moſt fine holland, running at leaſt five yards in the pound.

After your teare is thus dreſt, you ſhall ſpin it either upon wheel or rock, but the wheel is the ſwifteſt way, and the rock maketh the finer thread; you ſhall draw your thread according to the nature of the teare, and as long as it is even, it cannot be too ſmall, but if it be uneven, it will never make a durable Cloath. Now for as much as every Houſe-wife is not able to ſpin her owne teare in her owne houſe, you ſhall make choiſe of the beſt Spinners you can hear of, and to them put forth your teare to ſpin, weighing it before it go, and weighing it after it is ſpun and dry, allowing weight for weight, or an ounce and a halfe for waſte at the moſt: as for the prices for ſpinning, they are according to the natures of the Countrey, the fineneſſe of the teare, and the dearneſſe of proviſions: ſome ſpinning by the pound, ſome by the lay, and ſome by the day, as the bargain ſhall be made.

Of reeling of yarn.

After your yarn is ſpun upon ſpindles, ſpools, or ſuch like, you ſhall then reel it upon reeles, of which the reels which are hardly two foot in length, and have but onely two contrary croſſe bares, are the beſt, the moſt eaſie, and leſſe to be troubled with ravelling; and in the weaving of your fine yarn, to keep it the better from ravelling, you ſhall as you reele it, with a Ley-band of a big twiſt, divide the ſlipping or skeane into divers Leyes, allowing to every Ley eighty threads, and twenty Leyes to every ſlipping, the yarne being very fine, otherwiſe leſſe of both kinds: but if you ſpin by the Ley, as at a pound of Ley or ſo, then the ancient cuſtome hath been to allow to the reele which was eight yards, at above 160 threads to every Ley, and 25. Leyes, and ſometimes 30. Leyes to a ſlipping, which will ordinarily amount to a pound or thereabous; and ſo by that you may proportion forth the price for any manner of ſpinning whatſoever; for if the beſt thus, then the ſecond ſo much bated, and ſo accordingly the worſt.

Of the ſcowring of yarn.

After thus your yarn is ſpun and reeld, being in the ſlipings you ſhall ſcowr it: Therefore, firſt to fetch out the ſpots, you ſhall lay it in luke-warm water, and let it lye ſo three or

foure dayes, each day ſhifting it once, and wringing it out, and laying it in another water of the ſame nature; then carry it to a well or brook, and there rinſe it, till you ſee that nothing commeth from it, but pure clean water; for whileſt there is any filth within it, there will never be white cloth; which done, take a bucking tub, and cover the bottome thereof with very fine Aſhen-aſhes: then opening your ſlippings, and ſpreading them, lay them on thoſe Aſhes, then cover thoſe ſlippings with aſhes againe, then lay in more ſlippings, and cover them with aſhes as before, and thus lay one upon another, till all your yarn be laid in; then cover the uppermoſt yarne with a bucking cloth, and lay therein a peck or two, (according to the bigneſſe of the tub) of aſhes more, then powre into all through the uppermoſt cloth ſo much warme water, till the tub can receive no more; and ſo let it ſtand all night, the next morning you ſhall ſet a Kettle of clean water on the fire; and when it is warme, you ſhall pull out the ſpigget of the bucking tub, and let the water therein run into another clean veſſel; and as the bucking tub waſteth, ſo you ſhall fill it up againe with the warm water on the fire, and as the water on the fire waſteth, ſo you ſhall fill it up againe with the lie which commeth from the bucking tub, ever obſerving to make the lie hotter and hotter till it ſeeth; and then when it ſo ſeetheth, you ſhall as before apply it with boyling lie, at leaſt four houres together, which is called, the driving of a buck of yarn: All which being done, you ſhall take off the Bucking cloth, and then putting the yarne with the Lie-aſhes into large Tubs or Bowles, with your hands as hot as you can ſuffer it to poſſe, and labour the yarne, aſhes, and Lie, a pretty while together; then carry it to a Well, River, or other clean ſcouring water, and there rinſe it as clean as may be from the aſhes; then take it, and hang it up upon poles abroad in the ayre all day, and at night take the ſlippings downe, and lay them in water all night, then the next day hang them up againe, and if any part of them dry, then caſt water upon them, obſerving ever to turn that ſide outmoſt which whiteth ſloweſt, and thus doe at leaſt ſeven dayes together; then put all the yarne againe into a Bucking-Tub without aſhes, and cover it

Whiting of yarn.

it as before with a Bucking cloth, and lay thereupon good ſtore of freſh aſhes, and drive that buck as you did before, with very ſtrong ſeething Lies, the ſpace of half a day or more; then take it forth, poſſe it, rince it, and hang it up as you did before on the dayes, and laying it in water on the nights another week, and then waſh it over in fair water, and ſo dry it up.

Other wayes there are of ſcourings and whiting of yarn; as ſteeping it in bran and warm water, and then boyling it with *Oziar* ſticks, wheat ſtraw, water, and aſhes, and then poſſing, rinſing, and bleaching it upon hedges, or buſhes; but it is a foul and uncertain way, and I would not wiſh any good *Houſe-wife* to uſe it.

After your yarn is ſcoured and whited, you ſhall then wind it up into round balls of a reaſonable bigneſſe, rather without bottoms then with any at all, becauſe it may deceive you in the waight; for according to the pounds will ariſe your yards and lengths of cloth.

After your yarn is wound and weighed, you ſhall carry it to the Weavers, and wrap it as was before ſhewed for wollen cloth, knowing this, that if your Weaver be honeſt and skilfull, he will make you good and perfect cloth of even and even, that is juſt the ſame weight it weft, that there was in warp: As for the action of weaving it ſelfe, it is the work-mans occupation, and therefore to him I refer it.

The ſcouring and whiting of cloth.

After your cloth is woven and the Web or Webs come home, you ſhall firſt lay it to ſteep in all points as you did your yarn, to fetch out ſoyling and other filth, which is gathered from the Weaver; then rinſe it alſo as you did your yarn, then buck it alſo in lie and aſhes, as before ſaid, and rinſe it, and then having Loops fixt to the ſelvedge of the cloth, ſpread it upon the graſſe, and ſtake it down at the uttermoſt length and breadth, and as faſt as it dries, water it again, but take heed you wet it not too much, for fear you mildew or rot it; neither caſt water upon it, till you ſee it in a manner dry, and be ſure weekly to turn it firſt on one ſide, and then on the other, and at the end of the firſt week, you ſhall buck it as before in Lie and Aſhes again, then rinſe it, ſpread it, and water it as before; then if you ſee it whites apace, you need not to give it any more bucks with

the aſhes and the cloth mixt together, but then a couple of clean bucks, (as was before ſhewed in the yarn) the next fortnight following; and then being whitened enough, dry up the cloth and uſe it as occaſion ſhall require: the beſt ſeaſon for the ſame whitening, being *April* and *May*. Now the coorſe and worſt Houſe-wives, ſcour and white their cloth with water and bran, and buck it with lie and green hemlocks: but, as before I ſaid, it is not good, neither would I have it put in practiſe. And thus much for wool, hemp, flax, and cloth of each ſeverall ſubſtance.

CHAP. VI.

Of Dairies, Butter, Cheeſe, and the neceſſary things belonging to that Office.

THere followeth now in this place after theſe knowledges already rehearſed, the ordering and Government of Dairies, with the profits and commodities belonging to the ſame. And firſt touching the ſtock wherewith to furniſh Dairies, it is to be underſtood, that they muſt be Kine of the beſt choice and breed that our *Engliſh Houſe-wife* can poſſibly attain unto, as of big bone, fair ſhape, right bred, and deep of milk, gentle, and kindly.

Bigneſſe of Kine. Touching the bigneſſe of bone, the larger that every Cow is, the better ſhe is: for when either age or miſchance ſhall diſable her for the paile, being of large bone ſhe may be fed, and made fit for the ſhambles, and ſo no loſs but profit, and an other to the paile, as good and ſufficient as her ſelfe.

For her ſhape, it muſt a little differ from the Butchers rules; for being choſe for the Dairy, ſhe muſt have all the ſignes of plenty of milk; as a crumpled horn, a thin neck, a hairy dewlap, and a very large udder, with four teates, long, thick, and ſharp at the ends; for the moſt part either all white, of what colour ſoever the Cow be, or at leaſt the fore part thereof: and if it be well hair'd before and behind, and ſmooth in the bottom, it is a good ſigne.

The breed of Kine. As touching the right breed of Kine through our Nation, is

it generally affordeth very good ones, yet ſome Countries do far exceed other Countries, as *Cheſhire*, *Lancaſhire*, *Yorke-ſhire*, and *Darby-ſhire*, for black Kine; *Gloceſterſhire*, *Somerſetſhire*, and ſome part of *Wilt-ſhire*, for red Kine; and *Lincolnſhire* for pide Kine: and from the breeds of theſe Countries generally doe proceed the breeds of all other, howſoever diſperſed over the whole Kingdome. Now for our Houſwifes directions, ſhe ſhall chuſe her *Dairy* from any of the beſt breeds before named, *according as her opinion and delight ſhall govern her*, onely obſerving not to mixe her breeds of divers kinds, but to have all of one intire choyce without variation, becauſe it is unprofitable; neither muſt you by any means have your Bull a foreiner from your Kine, but either of one Country, or of one ſhape and colour: Again, in the choice of your Kine, you muſt look diligently to the goodneſſe and fertility of the ſoyl wherein you live, and by all meanes buy no Kine from a place that is more fruitful than your own, but rather harder; for the latter will proſper and come on, the other will decay and fall into diſeaſes; as the piſſing of blood, and ſuch like. For which diſeaſe, and all other you may find aſſured cures in the former book, called *Cheap and good*.

For the depth of milk in Kine (which is the giving of moſt milk) being the main of a Houſ-wifes profit, ſhe ſhall be very carefull to have that quality in her beaſts. Now thoſe Kine are ſaid to be deepeſt of milk, which are new hare; that is, which have but lately calved, and have their milke deepe ſpringing in their Udders, for at that ſhe giveth the moſt milke; and if the quantity then be not convenient, doubtleſſe the Cow cannot be ſaid to be of deep milke; and for the quantity of milke, for a Cow to give two gallons at a meal, is rare and extraordinary; to give a gallon and a halfe is much and convenient, and to give but a gallon certain; is not to be found fault with: Againe, thoſe Kine are ſaid to be deep of milke, which though they give not ſo exceeding much milke as others, yet they give a reaſonable quantity, and give it long, as all the year through, whereas other Kine that give more in quantity, will go dry, being with Calfe, ſome three months, ſome two, and ſome one, but theſe will give their

Depth of milk in Kine.

uſuall meaſure, even the night before they Calve ; and there-
Of the going dry of Kine. fore are ſaid to be Kine, deep of milke. Now for the retained opinion, that the Cow which goeth not dry at all, or very little, bringeth not forth ſo good a Calf as the other, becauſe it wanteth much of the nouriſhment it ſhould enjoy, it is vain and frivolous ; for, ſhould the ſubſtance from whence the milk proceedeth convert to the other intended nouriſhment, it would be ſo ſuperabundant, that it would convert either to diſeaſe or putrifaction ; but letting theſe ſecret reaſons paſſe, there be ſome Kine which are ſo exceedingly full of milk, that they muſt be milkt at leaſt thrice a day, at morning, Noon, and Evening, or elſe they will ſhed their milk ; but it is a fault rather than a vertue, and proceedeth more from a laxativeneſs or looſneſs of milk, than from any abundance ; for I never ſaw thoſe three meals yet, equal the two meals of a good Cow ; and therefore they are not truly called deep of milk.

Touching the gentleneſs of Kine, it is a vertue as fit to be expected as any other ; for if ſhe be not affable to the Maid, gentle and willing to come to the paile, and patient to have her dugges drawn without skittiſhneſs, ſtriking or wildneſs, ſhe is utterly unfit for the dairy.

Of kindlineſs in Kine. As a Cow muſt be gentle to her milker, ſo ſhe muſt be kind in her own nature ; that is, apt to conceive, and bring forth, fruitfull to nouriſh, and loving to that which ſpringe from her ; for ſo ſhe bringeth forth a double profit, the one for the time preſent, which is in the dairy, the other for the time to come, which is in the maintenance of the ſtock, and upholding of breed.

The beſt time to calve in, for the Dairy, or breed. The beſt time for a Cow to Calve in for the Dairy, is in the latter end of *March*, and all *April* : for then graſs beginneth to ſpring to its perfect goodneſſe, which will occaſion the greateſt increaſe of milk that may be, and one good early Cow will countervaile two latter, yet the Calves thus calved are not to be reared, but ſuffered to feed upon their Damms beſt milk, and then to be ſold to the Butchers, and ſurely the profit will equal the charge ; but thoſe Calves which fall in *October Novamber*, or any time of the depth of Winter may well be reared

reared up for breed, becauſe the main profit of the Dairy is then ſpent, and ſuch breed will hold up any Calves which are calved in the prime daies, for they generally are ſubject to the diſeaſe of the ſturdy, which is dangerous and mortal.

Rearing of Calves.

The Houſwife which onely hath reſpect to her Dairy, and for whoſe knowledge this diſcourſe is written (for wee have ſhewed the Graſier his Office in the Engliſh Husbandman) muſt rear her calves upon the finger with flotten milke, and nor ſuffer them to run with their dammes: the generall manner whereof, and the cure of all the diſeaſes incident to them, and all other Cattel is fully declared in the Book called *Cheape and Good.*

The general uſe of Dairies.

To proceed then to the generall uſe of Dairies, it conſiſteth firſt in the Cattel (of which we have ſpoke ſufficiently) then in the houres of milking, the ordering of the milk, and the profits ariſing from the ſame. The beſt and moſt commended hours for milking, are indeed but two in the day; that in the Spring and Summer time which is the beſt ſeaſon for the Dairy, is betwixt five and ſixe in the morning, and ſix and ſeven a clock in the evening; and although nice and curious Houſewives will have a third hour betwixt them, as between twelve and one in the afternoon, yet the better experienc'd do not allow it, and ſay as I believe, that two good meals of milk are better ever than three bad ones; alſo in the milking of a Cow, the woman muſt ſit on the neer ſide of the Cow, ſhe muſt gently at the firſt handle and ſtretch her dugges, and moiſten them with milk that they may yield out the milk the better, and with leſſe pain; ſhe ſhall not ſettle her ſelf to milk, nor fixe her paile firme to the ground till ſhe ſee the Cow ſtand ſure and firme, but be ready upon any motion of the Cow to ſave her pail from over-turning: when ſhe ſeeth all things anſwerable to her deſire, ſhe ſhall then milk the Cow boldly, and not leaving ſtretching and ſtraining of her teates, till not one drop of milk more will come from them; for the worſt point of Houſwifery that can be, is to leave a Cow halfe milkt; for beſides the loſſe of the milk, it is the only way to make a Cow dry, and utterly unprofitable for the Dairy. The Milkmaid whilſt ſhe is in milking, ſhall do nothing raſhly or ſud-

The hours of milking.

ſuddenly about the Cow, which may affright or amaze her; but as ſhe came gently, ſo with all gentleneſſe ſhe ſhall depart.

Ordering of milk. Touching the well-ordering of milke after it is come home to the Dairy, the maine poynt belonging thereunto is the Houſwifes cleanlineſſe, in the ſweet and neat keeping of the Dairy-houſe, where not the leaſt mote of any filth may by any means appear, but all things either to the eye or noſe ſo void of ſowrenes or ſluttiſhneſs, that a Princes Bed chamber muſt not exceed it: to this muſt be added, the ſweet and delicate keeping of her milk veſſels, whether they be of wood, earth, or lead, the beſt as yet is

Ordering of milk veſſels. diſputable with the beſt Houſ-wifes; onely this opinion is generally received, that the woodden veſſel, which is round and ſhallow, is beſt in cold vaults, the earthen veſſels principal for long keeping, and the leaden veſſel for yeelding of much Cream: but howſoever, any and all theſe muſt be carefully ſcalded once a day, and ſet in the open ayr to ſweeten, leſt getting any taint of ſowrneſſe into them, they corrupt the milk that ſhall be put therein.

Sylling of milk. But to proceed to my purpoſe, after your milk is come home, you ſhall as it were ſtrain it from all unclean things, through a neat and ſweet kept Syledish, the forme whereof every Houſewife knows; and the bottome of this Syle through which the milk muſt paſs, muſt be covered with a very clean waſht fine linnen cloath, ſuch an one as will not ſuffer the leaſt mote or hair to go through it: you ſhall into every veſſel ſoyl put a pretty quantity of milk, according to the proportion of the veſſel, the broader it is, and the ſhallower it is, the better it is, and yeeldeth ever the moſt Creame, and keepeth the milke longeſt from ſowring.

Profits ariſing from milk. Now for the profits ariſing from milke, they are three of eſpecial account, as Butter, Cheeſe, and Milk, to be eaten ſimple or compounded: as for Curds, ſowr Milk, or Whige, they come from ſecondary meanes, and therefore may not be numbred with theſe.

Of Butter. For your butter which only proceedeth from the Cream, which is the very heart and ſtrength of Milke, it muſt be gathered very carefully, diligently, and painfully: And though cleanli

cleanlineſs be ſuch an Ornament to a Houſwife, that if ſhe want any part thereof, ſhe loſeth both that and all good names elſe: yet in this action it muſt be more ſeriouſly imployed than in any other.

Of fleeting Cream.

To begin then with the fleeting or gathering of your Cream from the Milk, you ſhall do it in this manner: The Milk which you do milk in the morning, you ſhall with a fine thin ſhallow diſh, made for the purpoſe, take off the Cream about five of the Clock in the Evening; and the Milk which you did milk in the Evening, you ſhall fleete and take off the Cream about five of the clock the next morning; and the Cream ſo taken off, you ſhall put into a clean ſweet and well leaded earthen pot cloſe covered, and ſet it in a cloſe place; and this Cream ſo gathered, you ſhall not keep above two dayes in the Summer, and not above four in the Winter, if you will have the ſweeteſt and beſt butter, and that your Dairy contain but five Kine no more; but how many or few ſoever you keep, you ſhal not by any means preſerve your Cream above three dayes in Summer, and not above ſix in the Winter.

Of keeping Cream.

Of churming butter, and the dayes.

Your Cream being neatly and ſweet kept, you ſhall churme or churn it on thoſe uſual dayes which are fitteſt either for your uſe in the houſe, or the Markets adjoyning neer unto you, according to the purpoſe for which you keep your Dairy. Now the dayes moſt accuſtomably held amongſt ordinary Houſewives, are Tueſday and Friday: Tueſday in the afternoon, to ſerve Wedneſday morning market, and Friday morning to ſerve Saturday market; for Wedneſday and Saturday are the moſt general market dayes of this Kingdome, and Wedneſday, Friday, and Saturday, the uſuall faſting dayes of the week, and ſo meeteſt for the uſe of Butter. Now for Churming, take your Cream, and through a ſtrong and clean cloath ſtrain it into the Churm; and then covering the Churme cloſe, and ſetting it in a place fit for the action in which you are imployed; as in the Summer, in the cooleſt place of your Dairy, and exceeding early in the morning, or very late in the Evening: And in the Winter, in the warmeſt place of your Dairy, and in the moſt temperate hours, as about noon, or a little before or after, and ſo Churm it with

ſwift

ſwift ſtroaks, marking the noiſe of the ſame, which will be ſolid, heavy, and entire, untill you hear it alter, and the ſound is leight, ſharp, and more ſpiridly ; and then you ſhall ſay that your butter breaks, which perceived both by this ſound, the lightneſſe of the churm ſtaffe, and the ſparks and drops which will appear yelſow about the lid of the Churm ; then cleanſe with your hand both the lidde and the inward ſide of the churn, and having put all together, you ſhall cover the churn again, and then with eaſie ſtroaks round and not to the bottome, gather the butter together into one intire lump and body, leaving no pieces thereof ſeveral or unjoyned.

Helps in churming.

Now foraſmuch as there be many miſchiefs and inconveniences which may happen to butter in the churming. becauſe it is a body of much tenderneſſe, and neither will indure much heat nor much cold ; for if it be over-heated, it will look white, crumble, and be bitter in taſte ; and if it be over-cold it will not come at all, but will make you waſte much labour in vain : which faults to help, if you churne your butter in the heat of Summer it ſhall not be amiſſe, if during the time of your churning, you place your churne in a paile of cold water; as deep as your Cream riſeth in the churm, and in the churning thereof let your ſtrokes goe ſlow. and be ſure that your churn be cold when you put in your Cream : but if you churn in the coldeſt time of Winter, you ſhall then put in your Cream before the churn be cold, after it hath been ſcalded, you ſhall place it within the air of the fire, and churn it with as ſwift ſtrokes, and as faſt as may be, for the much labouring of it will keep it in a continual warmth, and thus you ſhall have your butter good, ſweet, and according to your wiſh. After your butter is churn'd, or churn'd and gathered well together in your churn, you ſhall then open your churn, and with both your hands gather it well together, and take it from the butter milke, and put it into a very clean bowl of wood, or panſhion of earth ſweetned for the purpoſe, and if you intend to ſpend the butter ſweet and freſh, you ſhall have your bowle or panſhion filled with very clean water, and therein with your hand you ſhall work the butter, turning and toſſing it

The handling of butter.

to

to and fro, till you have by that labour beaten and waſht out all the butter milk, and brought the butter to a firme ſubſtance of it ſelf, without any other moyſture; which done, you ſhall take the butter from the water, and with a point of a knife ſcotch and ſlice the butter over and over every way, as thick as is poſſible, leaving no part through which your knife muſt not paſs; for this will cleanſe and fetch out the ſmalleſt hair or mote, or rag of a ſtrainer, and any other thing which by caſual means may happen to fall into it.

After this you ſhall ſpread the butter in a bowl thin, and take ſo much ſalt as you can think convenient, which muſt by no means be much for ſweet butter, and ſprinkle it thereupon; then with your hands work the butter and the Salt exceeding well together, and then make it up either into diſhes, pounds, or half pounds at your pleaſure.

If during the month of *May* before you ſalt you butter you ſave a lump thereof, and put it into a veſſel, and ſo ſet it into the Sun the ſpace of that month, you ſhall find it exceeding ſoveraign and medicinable for wounds, ſtrains, aches, and ſuch like grievances. Of May Butter.

Touching the powdring up, or potting of butter, you ſhall by no means, as in freſh butter, waſh the butter milk out with water, but only work it cleer out with your hands: for water will make the butter ruſty, or reeſe: this done, you ſhall weigh your butter, and know how many pounds there is thereof: for ſhould you weigh it after it were ſalted, you would be much deceived in the weight; which done you ſhall open the butter, and ſalt it very well and throughly, beating it in with your hand till it be generally diſperſt through the whole butter: then take clean earthen pots, exceedingly well leaded, leſt the brine ſhould leak through the ſame, and caſt ſalt into the bottome of it: then lay in your butter, and preſſe it down hard within the ſame; and when your pot is filled, then cover the top thereof with ſalt, ſo as no butter be ſeen: then cloſing up the pot let it ſtand where it may be cold and ſafe: but if your Dairy be ſo little that you cannot at firſt fill up the pot, you ſhall then when you have potted up ſo much as you have, cover it all over with ſalt, and put the next quantity upon it till the pot be full.

Now

Now there be Houſwifes whoſe Dairies are great, can by no means conveniently have their butter contained in pots, as in *Holland*, *Suffolk*, *Norfolk*, and ſuch like, and therefore are fiſt to take barrels very cloſe and well made ; and after they have ſalted it well, they fill their barrels therewith ; then they take a ſmal ſtick clean, and ſweet, and therewith make divers holes down through the butter, even to the bottome of the barrel ; and then make a ſtrong brine of water and ſalt which will bear an Egge, and after it is well boyl'd, well skimmed and cool'd, then pour it upon the top of the butter, till it ſwim above the ſame, and ſo let it ſettle. Some uſe to boyl in this brine a branch or two of Roſemary, and it is not amiſſe, but pleaſant and wholeſome.

When to pot butter.

Now although you may at any time betwixt *May* and *September* pot up butter, obſerving to doe it in the cooleſt time of the morning; yet the moſt principal ſeaſon of all is in the month of *May* only ; for then the ayr is moſt temperate, and the butter will take ſalt the beſt, and the leaſt ſubject to reeſing.

The beſt uſe of butter milk for the ableſt Houſe-wife is Charitably to beſtow it on the poor neighbours, whoſe wants doe daily crye out for ſuſtenance ; and no doubt but ſhe ſhall find the profit thereof in a divine place, as well as in her earthly buſineſſe. But if her own wants command her to uſe it for her own good, then ſhe ſhall of her butter milk make Curds, in this manner : ſhe ſhall take her butter milk and put it into a clean earthen veſſel, which is much larger than to receive the butter-milk onely ; and looking unto the quantity thereof, ſhe ſhall take as it were a third part ſo much of new milk, and ſet it on the fire, and when it is ready to riſe, take it off, and let it cool a little ; then powr it into the butter milke in the ſame manner as you would make a poſſet ; and having ſtired it about, let it ſtand ; then with a fine skummer, when you will uſe the curds (for the longer it ſtands, the better the curds will eate) take them up into a Cullander, and let the whey drop well from it, and then eat them either with Creame, Ale, Wine, or Beere ; as for the Whey, you may keep it alſo in a ſweet ſtone veſſel ; for it is that which is called Whig, and

and it is an excellent cool drink, and wholeſome, and may very well be drunk a ſummer through, inſtead of any other drink; and without doubt, will ſlake the thirſt of any labouring man as well, if not better.

Of Cheeſe. The next main profit which ariſeth from the Dairy, is Cheeſe, of which there be divers kinds, as new milk, or morrow milk Cheeſe, Nettle-cheeſe, Floaten-milk-cheeſe, and Eddiſh, or After-math-cheeſe, all which have their ſeveral orderings and compoſitions, as you ſhall perceive by the diſcourſe following. Yet before I do beginne to ſpeak of the making of the Cheeſe, I will ſhew you how to order your *Cheeſlep-bag* or *Runnet*, which is the moſt principal thing wherewith your Cheeſe is compounded, and giveth the perfect taſte unto the ſame.

Of the Cheeſe-lep bag or Runnet. The *Cheeſlep-bag*, or *Runnet*, is the *ſtomack bag* of a young ſucking Calf, which never taſted other food than milk, where the curd lyeth undigeſted. Of theſe bags you ſhall in the beginning of the year, provide your ſelfe good ſtore, and firſt open the bag, and powre out into a clean veſſel the curd and thick ſubſtance thereof; but the reſt which is not curdled you ſhall put away: then open the curd and pick out of it all manner of motes, chiers of graſſe, or other filth gotten into the ſame: then waſh the curd in ſo many cold waters, till it be as white and clean from all ſorts of moates as is poſſible; then lay it on a clean cloath that the water may draine from it, which done, lay it in another dry veſſel; then take a handful or two of ſalt, and rub the curd therewith exceedingly, then take your bag, and waſh it alſo in divers cold waters till it be very clean, and then put the curd and the ſalt up into the bag, the bag being alſo well rub'd within with ſalt; and ſo put it up, and ſalt the outſide alſo over, and then cloze up the pot cloſe, and ſo keep them a full year before you uſe them. For touching the hanging of them up in chimney corners, (as coorſe Houſe-wifes doe) it is ſluttiſh, naught, and unwholeſome; and the ſpending of your Runnet whilſt it is new, makes your Cheeſe heavy, and to prove hollow.

When your Runnet or Earning is fit to be uſed, you ſhall ſeaſon

ſeaſon it after this manner; you ſhall take the bag you intend to uſe, and opening it, put the curd into a ſtone morter or a bowle, and with a wooden peſtle, or a rolling pin beat it exceedingly; then put to it the yolks of two or three egges, and half a pint of the thickeſt and ſweeteſt creame you can fleet from your milk, with a penny worth of Saffron finely dryed and beaten to powder, together with a little Cloves, and Mace, and ſtirre them all paſſing well together, till they appear but as one ſubſtance, and then put it up in the bag againe: then you ſhall make a very ſtrong brine of water and ſalt, and in the ſame you ſhall boyle a handful of Saxifrage, and then when it is cold, clear it into a clean earthen veſſel: then take out of the bag half a dozen ſpoonfuls of the former curd, and mixe it with the brine; then cloſing the bag up againe cloſe, hang it with the brine, and in any caſe alſo ſteep in your brine a few Walnut-tree leaves, and ſo keep your Runnet a fortnight after before you uſe it; and in this manner, dreſſe all your bags ſo, as you may ever have one ready after another, and the youngeſt a fortnight old ever at the leaſt; for that will make the earning quick and ſharp, ſo that foure ſpoonfuls thereof will ſuffice for the gathering and ſeaſoning of at leaſt twelve Gallons of milk, and this is the choyceſt and beſt earning which can poſſible be made by any Houſe-wife.

To make a new milk or morning milk cheeſe, which is the beſt cheeſe made ordinarily in our Kingdome; you ſhall take your milk early in the morning, as it comes from the Cow, and ſyle it into a clean Tub; then take all the Creame alſo from the milke you milk'd the evening before, and ſtraine it into your new milk: then take a pretty quantity of clean water, and having made it ſcalding hot, powr it into the milk, alſo to ſcald the creame and it together: then let it ſtand, and cool it with a diſh till it be no more than luke-warm; then goe to the pot where your earning bags hang, and draw from thence ſo much of the earning without ſtirring of the bag, as will ſerve for your proportion of milk, and ſtrain it therein very carefully; for if the leaſt mote of the curd of the earning fall into the cheeſe, it will make the cheeſe rot and mould;

mould ; when you earning is put in , you ſhall cover the milk , and ſo let it ſtand half an hour or thereabout ; for if the earning be good , it will come in that ſpace ; but if you ſee it doth not , then you ſhall put in more : being come, you ſhall with a diſh in your hand break and maſh the curd together, poſſing and turning it diverſly : which done , with the flat palmes of your hands very gently preſſe the curd downe into the bottome of the Tub ; then with a thin diſh take the whey from it as cleane as you can , and ſo having prepared your Cheeſe-fat anſwerable to the proportion of your curd, with both your hands joyned together , put your curd therein and break it , and preſſe it down hard into the fat, till you have fill'd it ; then lay upon the top of the curd your hard cheeſe-board, and a little ſmall weight thereupon , that the whey may drop from it into the under veſſel ; when it hath done dropping, take a large Cheeſe-cloth , and having wet it in the cold water , lay it on the Cheeſe-boord, and then turn the Cheeſe upon it ; then lay the cloth into the Cheeſe-fat, and ſo put the Cheeſe therein againe , and with a thinne ſlice thruſt the ſame down cloſe on every ſide : then laying the cloth alſo over the top to lay on the Cheeſe-boord , and ſo carry it to your great preſſe , and there preſs it under a ſufficient weight : after it hath been there preſt half an hour , you ſhall take it, and turn it into a dry cloth , and put it into the preſſe againe , and thus you ſhall turne it into dry cloths at leaſt five or ſix times in the firſt day , and ever put it under the preſſe againe , not taking it therefrom till the next day in the evening at ſooneſt , and the laſt time it is turned , you ſhall turne it into the dry fat without any cloth at all.

When it is preſt ſufficiently , and taken from the fat, you ſhall then lay it in a Kimnel , and rub it firſt on the one ſide, and then on the other with ſalt , and ſo let it lie all that night, then the next morning you ſhall doe the like againe , and ſo turn it out upon the brine , which comes from the ſalt two or three dayes more , according to the bigneſſe of the Cheeſe, and then lay it upon a fair Table or ſhelf to dry , forgetting not every day once to rub it all over with a clean cloth,

and

and then to turn it till ſuch time that it be throughly dry, and fit to go into the Cheeſe-heck: and in this manner of drying, you muſt obſerve to lay it firſt where it may dry haſtily, and after where it may dry at more leaſure: thus may you make the beſt and moſt principal Cheeſe.

A cheeſe of two meals.

Now if you will make a Cheeſe of two meales, as your mornings new milk, and the evenings cream milk, all you ſhall do, is but the ſame formerly rehearſed. And if you will make a ſimple morrow milk Cheeſe, which is all of new milk, and nothing elſe, you ſhall then do as is before declared, onely you ſhall put in your earning ſo ſoon as the milk is fil'd, (if it have any warmth in't) and not ſcald it: but if the warmth be loſt, you ſhall put it into a kettle, and give it the air of the fire.

Cheeſe of one meale.

Of Nettle cheeſe.

If you will have a very dainty nettle Cheeſe, which is the fineſt ſummer cheeſe which can be eaten; you ſhall doe in all things as was formerly taught in the new milk cheeſe compound: Onely you ſhall put the curd into a very thin Cheeſe-fat, not above half an inch, or a little better deep at the moſt, and then when you come to dry them, as ſoon as it is drained from the brine, you ſhall lay it upon freſh nettles, and cover it all over with the ſame, and ſo lying where they may feel the aire, let them ripen therein, obſerving to renew your nettles once in two dayes, and every time you renew them, to turn the Cheeſe or Cheeſes, and to gather your nettles as much without ſtalkes as may be, and to make the bed both under and aloft as ſmooth as may be, for the more even and fewer wrinkles that your cheeſe hath, the more dainty is your Houſe-wife accounted.

Of floaten milk cheeſe.

If you will make floaten milk cheeſe, which is the coorſeſt of all cheeſe, you ſhall take ſome of the milk, and heat it upon the fire to warm all the reſt; but if it be ſoure, that you dare not adventure the warming of it for fear of breaking, then you ſhall heat water, and with it warm it; then put in your earning as before ſhewed, and gather it, preſs it, ſalt it, and dry it, as you did all other Cheeſes.

Of Eddiſh cheeſe.

Touching your Eddiſh Cheeſe, or Winter Cheeſe, there is not any difference betwixt it and your ſummer Cheeſe, touching

ing the making thereof onely, becauſe the ſeaſon of the year denieth a kindly drying or hardning thereof, it differeth much in taſte, and will be ſoft alwaies; and of theſe eddiſh Cheeſes you may make as many kinds as of Summer Cheeſes, as of one meale, two meales, or of milk that is floaten.

When you have made your Cheeſe, you ſhall then have care of the Whey, whoſe generall uſe differeth not from that of Butter-milk, for either you ſhall preſerve it to beſtow on the poor, becauſe it is a good drink for the labouring man, or keep it to make curds out of it, or laſtly, to nouriſh and bring up your Swine.

If you will make curds of your beſt Whey, you ſhall ſet it upon the fire, and being ready to boyl, you ſhall put into it a pretty quantity of Butter milk, and then as you ſee the Curds ariſing up to the Top of the Whey, with a skummer skim them off, and put them into a Cullender, and then put in more Butter-milk, and thus doe whilſt you can ſee any Curds ariſe; then the Whey being drained clean from them, put them into a clean veſſel, and ſo ſerve them forth as occaſion ſhall ſerve. Of whey curds.

CHAP. VII.

The Office of the Malt, and the ſeverall ſecrets, and knowledges belonging to the making of Malt.

IT is moſt requiſite and fit, that our *Houſe-wife* be experienced and well practiſed in the well making of Malt, both for the neceſſary and continuall uſe thereof, as alſo for the generall profit which accreweth and ariſeth to the *Husband*, *Houſe-wife*, and the whole Family; for as from it is made the drink by which the Houſhold is nouriſhed and ſuſtained, ſo to the fruitfull Husband-man, (who is the Maſter of rich ground, and much Tillage) it is an excellent Merchandiſe, and a commodity of ſo great Trade, that not onely ſpeciall Towns and Countries are maintained thereby, but alſo the whole Kingdome, and divers others of our neighbouring Nations.

tions. This office or place of knowledge belongeth particularly to the Houſe-wife; and though we have many excellent Men-malſters, yet it is properly the work and care of the woman, for it is a houſe-work, and done altogether within dores, where generally lyeth her charge; the man only ought to bring in, and to provide the grain, and excuſe from her portage or too heavy burthens, but for the Art of making the Malt, and the ſeverall labours appertaining to the ſame, even from the Fat to the Kiln, it is onely the work of the Houſe-wife, and the Maid-ſervants to her appertaining.

To begin then with the firſt knowledge of our Maltſter, it conſiſteth in the election and choiſe of grain, fit to make Malt on, of which there are indeed truly but two kinds, that is to ſay, Barley, which is of all other the moſt excellent for this purpoſe; and Oates, which when Barley is ſcant or wanting, maketh alſo a good and ſufficient Malt: and though the drink which is drawn from it, be neither ſo much in the quantity, ſo ſtrong in the ſubſtance, nor yet ſo pleaſant in the taſte, yet is the drink very good and tolerable, and nouriſhing enough for any reaſonable creature. Now I do not deny, but there may be made Malt of Wheat, Peaſe, Lupins, Fetches, and ſuch like, yet it is with us of no retained cuſtom, nor is the drink ſimply drawn or extracted from thoſe grains, either wholeſome or pleaſant, but ſtrong and fulſome: therefore I think it not fit to ſpend any time in treating of the ſame. To ſpeak then of the election of Barly, you ſhall underſtand that there be divers kinds thereof, according to the alteration of ſoyles, ſome being big, ſome little, ſome empty, ſome full, ſome white, ſome brown, and ſome yellow; but I will reduce all theſe into three kinds, that is, into the Clay Barley, the Sandy-Barly, and the Barly which groweth on the mixt ſoyl. Now the beſt Barly to make Malt on, both for yeelding the greateſt quantity of matter, and making the ſtrongeſt, beſt, and moſt wholeſome drink, is the Clay Barley well dreſt, being clean Corne of it ſelfe, without Weed or Oates, white of colour, full in ſubſtance, and ſweet in taſte: that which groweth on the mixt grounds is the next; for though it be ſubject to

ſome

ſome Oates and ſome Weeds: yet being painfully and carefully dreſt, it is a fair and boll'd Corn, great and full; and though ſomewhat browner than the former, yet it is of a fair and clean complexion. The laſt and worſt grain for this purpoſe is the Sand Barly, for although it be ſeldome or never mixt with Oates, yet if the Tillage be not painfully and cunningly handled, it is much ſubject to weeds of divers kinds, as Tares, Fetches, and ſuch like, which drink up the Liquor in the brewing, and make the yeeld or quantity thereof very little and unprofitable: beſides the grain naturally of it ſelf hath a yellow, withered, empty huſk, thick and unfurniſhed of meal, ſo that the drink drawn from it, can neither be ſo much, ſo ſtrong, ſo good, nor ſo pleaſant; ſo that to conclude, the clean Clay Barley is beſt for profit in the ſale drink, for ſtrength and long laſting.

The Barley in the mixt grounds will ſerve well for Houſholds and Families: and the ſandy barley for the poor, and in ſuch places where better is not to be gotten. And theſe are to be known of every *Husband* or *Houſe-wife*: the firſt by his whiteneſs, greatneſs, and fulneſs: the ſecond by his browneneſs; and the third by his yellowneſs, with a dark brown nether end, and the emptineſs, and thickneſs of the huſk: and (in this election of barly) you ſhall note, that if you find in it any wild Oats, it is a ſigne of rich clay ground, but ill Husbanded; yet the malt made thereof is not much amiſs, for both the wild Oat and the perfect Oat give a pleaſant ſharp reliſh to the drink, if the quantity be not too much, which is evermore to be reſpected. And to conclude this matter of election, great care muſt be had of both *Husband* and *Houſe-wife*, that the barley choſen for malt, be exceeding ſweet, both in ſmell and taſte, and very clean dreſt: for any corruption maketh the malt loathſome, and the foul dreſſing affordeth much loſſe.

Of the Malt-houſe, and the ſituation.

After the skilfull election of grain for malt, the *Houſe-wife* is to look to the ſituation, goodneſſe and apt accommodation of the Malt-houſe: for in that conſiſteth both much of the skill, and much of the profit: for the generall ſituation of the houſe, it would (as near as can be) ſtand upon firm dry ground, having proſpect every way, with open Windows and Lights to let in the

Wind, Sun, and Ayr, which way the Maſter pleaſeth, both to cool and comfort the grain at pleaſure, and alſo cloſe-ſhuts, or draw-windowes to keep out the Froſts and Storms, which are the only lets and hinderances for making the malt good and perfect: for the model or form of the houſes, ſome are made round, with a Court in the middle, ſome long, and ſome ſquare, but the round is the beſt, and the leaſt laborious; for the Ceſterns or Fats being placed (as it were) at the head or beginning of the Circle, and the Pump or Well, (but the Pump is beſt) being cloſe adjoyning, or at leaſt by conveyance of troughs made as uſefull as if it were neer adjoyning, the Corn being ſteept, may with one perſons labour and a ſhovell, be caſt from the Fat or Ceſtern to the floor, and there coucht; then when the couch is brok n, it may in the turning either with the hand or the ſhovell be carried in ſuch a circular houſe round about from one floor to another, till it come to the Kiln, which would alſo be placed next over againſt the Pump and Ceſterns, and all contained under one roof.

And thus you may empty ſteeping after ſteeping, and carry them with one perſons labour from floor to floor, till all the floors be filled: in which circular motion you ſhall find, that ever that which was firſt ſteept, ſhall firſt come to the Kiln, and ſo conſequently one after another, in ſuch ſort as they were ſteeped, and your work may evermore be conſtant, and your floors at no time empty, but at your owne pleaſure, and all the labour done onely with the hand and ſhovell, without carrying or re-carrying, or lifting heavy burthens, which is both troubleſom and offenſive, and not without much loſſe, becauſe in ſuch caſes ever ſome grain ſcattereth.

Now over againſt the Kilne-hole or Furnace, (which is evermore intended to be on the ground) ſhould a convenient place be made to pile the fewell for the Kiln, whether it be Straw, Bracken, Furres, Wood, Coal, or other fewell; but ſweet Straw is of all other the beſt and neateſt. Now it is intended that this *Malt-houſe* may be made two ſtories in height, but no higher: over your Ceſterns ſhall be made the Garners wherein to keep your Barley before it be ſteeped: in the bottoms of theſe Garners, ſtanding directly over the Ceſterns, ſhall be

be convenient holes made to open and ſhut at pleaſure, through which ſhall run down the barley into the Ceſtern.

Over the bed of the Kiln can be nothing but the place for the hair cloth, and a ſpacious roof open every way that the ſmoke may have a free paſſage and with the leaſt air be carried from the kiln, which maketh the malt ſweet and pleaſant. Over that place where the fewel is piled, and is next of all to the bed of the kiln, would likewiſe be other ſpacious Garners made, ſome to receive the Malt as ſoon as it is dryed with the Comb and Kilne duſt, in which it may lye to mellow and ripen, and others to receive the malt after it is skreened and dreſt up; for to let it be too long in the Comb, as above three months at longeſt, will make it both corrupt, and breed Weevels and other worms, which are the greateſt deſtroyers of malt that may be. And theſe Garners ſhould be ſo conveniently plac't before the front of the Kiln bed, that either with the ſhovel or a ſmall ſcuttle you may caſt, or carry the malt once dryed into the Garners.

For the other part of the floores, they may be employed as the ground floores are, for the receiving of the malt when it comes from the Ceſtern; and in this manner, and with theſe accommodations you may faſhion any Malt-houſe, either round, long ſquare, or of what proportion ſoever, as either your eſtate, or the convenience of the ground you have to build on ſhall adminiſter.

Next to the ſite or proportion of the ground, you ſhall have a principal care for the making of your malt floors, in which *all the cuſtome and the nature of the ſoyl binds many times a man to ſundry inconveniences, and that a man muſt neceſſarily build according to the matter he hath to build withall, from whence ariſeth the many diverſities of Malt floores*, yet you ſhall underſtand, that the generall beſt Malt floor both for Summer and Winter and all ſeaſons, is the Cave or vaulted Arch which is hewed out of a dry and main gretty Rock, for it is both warm in Winter, and cool in Summer, and generally comfortable in all ſeaſons of the year whatſoever. For it is to be noted, that all *Houſewives* doe give over the making of malt in the extream heat of Summer, it is not becauſe the Malt is worſe that is made in ſummer than that which is made in Winter, but becauſe the floores are more unſeaſonable, and that the Sun getting a power into ſuch open Of Malt-floors.

places, maketh the grain which is ſteeped to ſprout and come ſo ſwiftly, that it cannot indure to take time on the floor, and get the right ſeaſoning which belongeth to the ſame: whereas theſe kind of vaults being dry, and as it were coucht under the ground, not onely keepeth out the Sun in Summer, which maketh the Malt come much too faſt, but alſo defendeth it from froſt, and cold bitter blaſts in ſharp Winter, which will not ſuffer it to come, or ſprout at all; or if part do come and ſprout, as that which lyeth in the heart of the bed; yet the upper parts and outſide by means of extream cold cannot ſprout, but being again dryed hath its firſt hardneſs, and is one and the ſame with raw barley; for every *Houſewife* muſt know, that if Malt do not come as it were altogether, and at an inſtant, and not one come more than another, the Malt muſt needs be very much imperfect.

The next floor to the Cave, or dry Sandy Rock, is the floore which is made of earth, or a ſtiff ſtrong binding clay well watered, and mixt with Horſe-dung and Soap-aſhes, beaten and wrought together, till it come to one ſolid firmneſſe; this floor is a very warme comfortable Floore in the Winter ſeaſon, and will help the graine to come and ſprout exceedingly, and with the help of windows to let in the cold ayr, and to ſhut out the violent reflection of the Sun, will ſerve very conveniently for the making of Malt, for nine months in the year, that is to ſay from *September* till the end of *May*; but for *June*, *July*, and *Auguſt*, to imploy it to that purpoſe, will breed both loſs and incumbrance. The next floor to this of the earth, is that which is made of *plaſter*, or *plaſter of Paris*, being burnt in a ſeaſonable time, and kept from wet, till the time of ſhooting, and then ſmoothly laid, and well levelled; the imperfection of the *plaſter floor* is onely the extreame coldneſſe thereof, which in froſty and cold ſeaſon ſo bindeth in the heart of the Grain, that it cannot ſprout, for which cauſe it behoveth every Malſter that is compelled to theſe floors, to look well unto the ſeaſons of the year, and when he findeth either the froſts, Northern blaſts, or other nipping ſtorms to rage too violently, then to make his firſt couches or beds, when the Grain commeth newly out of the Ceſtern, much thicker and rounder than otherwiſe he would do; and as the cold abateth, or the corn increaſeth in

ſprouting

ſprouting, ſo to make couches or beds thinner and thinner; for the thicker and cloſer the grain is coucht and laid together, the warmer it lyeth, and ſo catching heat, the ſooner it ſprouteth, and the thinner it lyeth, the cooler it is, and ſo much the ſlower in ſprouting. This floor, if the windows be cloſe, and guard off the Sun ſufficiently, will (if neceſſity compel) ſerve for the making of Malt ten months in the year; only in *July* and *Auguſt*, which contain the Dog dayes, it would not be employed, nor in the time of any froſt, without great care and circumſpection.

Again, there is in this floor another fault, which is a naturall caſting out of duſt, which much ſullieth the grain; and, being dryed, makes it look dun and foul, which is much diſparagement to the malſter; therefore ſhe muſt have great care that when the malt is taken away, ſhe ſweep and keep her floors as clean and neat as may be. The laſt and worſt is the boarded floor, of what kind ſoever it be, by reaſon of the too much heat thereof, and yet of boarded floores the Oaken boarded is the cooleſt and longeſt laſting; the Elme or Beech is next, then the Aſh, and the worſt (though it be the faireſt to the Eye) is the Firre, for it hath in it ſelf (by reaſon of the Frankincenſe and Turpentine which it holdeth) a naturall heat, which mixed with the violence of the Sun in the Summer time, forceth the grain not only to ſprout but to grow in the couch, which is much loſſe, and a fowl imputation. Now theſe boarded floors can hardly be in uſe for above five months at the moſt, that is to ſay, *October*, *November*, *December*, *January*, and *February*; for the reſt, the Sun hath too much ſtrength, and theſe boarded floores too much warmth; and therefore, in the cooleſt times it is good to obſerve to make the couch thin, whereby the ayr may paſs through the corn, and ſo cool it, that it may ſprout at leiſure.

Now for any other floor beſides theſe already named, there is not any good, to malt upon; for the common floor which is of natural earth, whether it be Clay, Sand, or Gravell, if it have no mixture at all with it more than its own nature, by oft treading upon it, groweth to gather the nature of ſaltneſſe, or Salt-peter into it, which not onely giveth an ill taſte to the grain that is laid upon the ſame, but alſo his moyſture and mould- Imperfect floors.

dineſs, which in the moiſt times of the year ariſe from the ground, it often corrupteth and putrifieth the corn; the rough paved floor by reaſon of the unevenneſſe, is unfit to malt on, becauſe the grain getting into the crannies, doth there lye, and is not removed or turned up and down as ſhould be with the hand, but many times is ſo fixed to the ground that it ſprouteth and groweth up into a green blade, affording much loſs and hinderance to the owner.

The ſmooth paved floor, or any floore of ſtone whatſoever is full as ill; for every one of them naturally againſt much wet or change of weather, will ſweat and diſtill forth ſuch abundant moiſture, that the malt lying upon the ſame, can neither dry kindly, nor expel the former moyſture received in the ceſtern, but alſo by that over much moiſture many times rotteth, and comes to be altogether uſeleſſe. Laſtly for the floore made of lime and hair, it is as ill as any formerly ſpoken of, both in reſpect of the nature of the Lime, whoſe heat and ſharpneſſe is a main enemy to malt, or any moiſt corn, as alſo in reſpect of the weakneſſe and brittleneſſe of the ſubſtance thereof, being apt to molder and fall in pieces with the lighteſt treading on the ſame, and that lime and duſt once mixing with the corn, it doth ſo poyſon and ſuffocate it, that it neither can ſprout, nor turn ſerviceable for any uſe.

Of the Kiln and the building the reof.

Next unto the Malt-floores, our Malſter ſhall have a great care, in the framing and faſhioning of the Kiln, of which there are ſundry ſorts of models, as the ancient forme which was in times paſt uſed of our fore fathers being only made in a ſquare proportion at the top, with ſmall ſplints or rafters, joyned within four inches one of another going from a maine beam croſſing the mid part of that great ſquare: then is this great ſquare from the top, with good and ſufficient ſtuds to be drawn ſlope-wiſe narrower and narrower, till it come to the ground, ſo that the harth or loweſt part thereof may not be above a ſixth part to the great ſquare above, on which the malt is laid to be dryed; and this harth ſhall be made hollow and deſcending, and not level nor aſcending; and theſe Kilns do not hold any certain quantity in the upper ſquare, but may ever be according to the frame of the houſe, ſome being thirty foot each way

way, ſome twenty, and ſome eighteen. There be other Kilnes which are made after this manner open and ſlope, but they are round of proportion; but both theſe kinds of Kilns have one fault, which is danger of fire; for lying every way open and apt for the blaze, if the *Malſter* be any thing negligent, either in the bouting of the blaze low and forward, or not ſweeping every part about the harth any thing that may take fire, or fore-ſeeing that no ſtraws which do belong to the bedding of the Kiln do hang down or are looſe, whereby the fire may take hold of them, it is very poſſible that the Kiln may be ſet on fire; to the great loſs and often undoing of the owners.

Which to prevent, and that the *Malſter* may have better aſ- The perfect Kiln.
ſurance and comfort in her labour, there is a Kiln now of general uſe in this Kingdome, which is call'd a *French* Kiln, being framed of a brick, aſhler, or other fire ſtone, according to the nature of the ſoyl in which Husbands and Houſewives live: and this french Kiln is ever ſafe and ſecure from fire; and whether the Malſter wake or ſleep, without extream wilfull negligence, there can no danger come to the Kilne; and in theſe Kilns may be burnt any kind of fewel whatſoever, and neither ſhall the ſmoak offend or breed ill taſte in the malt, nor yet diſcolour it, as many times it doth in open Kilnes, where the malt is as it were covered all over, and even parboyl'd in ſmoke, ſo that of all ſorts of Kilnes whatſoever, this which is called the french Kiln, is to be preferred and only embraced. Of the forme or modell whereof, I will not here ſtand to treat, becauſe they are now ſo generally frequent amongſt us, that no Maſon or Carpenter in the whole Kingdome but can build the ſame; ſo that to uſe more words thereof were tediouſneſſe to little purpoſe. Now there is another kind of Kiln, which I have ſeene (and but in the Weſt Country onely) which for the profitable quaintneſſe thereof, I took ſome ſpecial note of, and that was a Kiln made at the end of a Kitchin Raunge or Chimney, being in ſhape round, and made of brick, with a little hollowneſſe narrowed by degrees, into which came from the bottome and midſt of the Kitchin chimney a hollow tunnel or vault, like the tunnel of a Chimney, and ran directly on the back ſide the hood, or back of the Kitchin chimney; then in the midſt of the chimney where the

the greateſt ſtrength of the fire was made, was a ſquare hole made of about a foot and half every way, with an iron thick plate to draw to and fro, opening and cloſing the hole at pleaſure; and this hole doth open only into that tunnel which went to the Kiln, ſo that the malt being once laid, and ſpread upon the Kiln; draw away the Iron plate, and the ordinary fire with which you dreſſe your meat, and perform other neceſſary buſineſſe, is ſuckt up into this tunnel, and ſo conveyeth the heat to the Kiln, where it dryeth the malt with as great perfection as any Kiln I ſaw in my life, and needeth neither attendrance or other ceremony more, than once in five or ſixe houres to turn the malt, and take it away when it is dryed ſufficiently: for it is here to be noted, that how great or violent ſoever the fire be, which is in the chimney, yet by reaſon of the paſſage, and the quantity thereof, it carrieth no more than a moderate heat to the Kiln; and for the ſmoak, it is ſo carried away in other loop-holes which run from the hollowneſſe between the tunnel, and the Malt-bed, that no malt in the World can poſſibly be ſweeter or more delicately coloured: only the fault of theſe Kilns are, that they are but little in compaſs, and ſo cannot dry much at a time, as not above a quarter or ten ſtrikes at the moſt in one drying, and therefore are no more but for a mans own particular uſe, and for the furniſhing of one ſetled Family; but ſo applyed, they exceed all the Kilns that I have ſeen whatſoever.

Bedding of the Kiln.

When our *Malſter* hath thus perfected the Malt houſe and Kiln, then next look to the well bedding of the Kiln, which is diverſly done according to mens divers opinions: for ſome uſe one thing, and ſome another, as the neceſſity of the place, or mens particular profits draw them.

But firſt to ſhew you what the bedding of a *Kiln* is, you ſhall underſtand that it is a thin covering laid upon the open rafters, which are next unto the heat of the fire, being made either ſo thin, or ſo open, that the ſmalleſt heat may paſſe through it, and come to the corn: this bed muſt be laid ſo even and level as may be, and not thicker in one place than another, leſt the Malt dry too faſt where it is thinneſt, and too ſlowly where it is thick, and ſo in the taſte ſeem to be of two ſeveral dryings.

It

It muſt alſo be made of ſuch ſtuff, as having received heat, it will long continue the ſame, and be aſſiſtant to the fire in drying the corn; it ſhould alſo have in it no moiſt or darkiſh property, leſt at the firſt receiving of the fire it ſend out a ſtinking ſmoak, and ſo taint the malt; nor ſhould it be of any rough or ſharp ſubſtance, becauſe upon this bed or bedding is laid the hair cloath, and on the hair-cloth the Malt, ſo that with the turning the Malt and treading upon the cloth, ſhould the bed be of any ſuch roughneſſe, it would ſoon wear out the hair cloth, which would be both loſſe and ill *Houſewifery*, which is carefully to be eſchewed.

But now for the manner or ſubſtance whereof this bedding ſhould be made, the beſt, neateſt, and ſweeteſt, is clean long Rye ſtraw, with the eares onely cut off, and the ends laid even together, not one longer than another, and ſo ſpread upon the rafter of the Kilne as even and thinne as may be, and laid as it were ſtraw by ſtraw in a juſt proportion, where skill and induſtry may make it thin or thick at pleaſure, as but the thickneſſe of one ſtraw, or of two, three, four or five, as ſhall ſeem to your judgement moſt convenient; and than this, there can be nothing more even, more dry, ſweet, or open to let in the heat at your pleaſure; and although in the old open Kilnes it be ſubject to danger of fire, by reaſon of the quickneſſe to receive the flame, yet in the french Kilnes (before mentioned) it is a moſt ſafe bedding, for not any fire can come neer unto it. There be others which bed the Kilne with Mat; and it is not much to be miſliked, if the Mat be made of Rye ſtraw ſowed, and woven together according to the manner of the *Indian mats*, or thoſe uſual thin *Bent Mats*, which you ſhall commonly ſee in the Summer time ſtanding in *Huſbandmens* Chimneyes, where one bent or ſtraw is laid by another, and ſo woven together with a good ſtrong pack-thread: but theſe *Mats* according to the old Proverb (*Moſt coſt, moſt worſhip*) for they are chargeable to be bought, and very troubleſome in the making, and in the wearing will not out-laſt one of the former looſe beddings; for if one thread or ſtitch break, immediately moſt in that row will follow: onely it is moſt certain, that during the time it laſteth, it is both

both good, neceſſary and handſome. But if the *Mat* be made either of Bulruſhes, Flags, or any other thick ſubſtance (as for the moſt part they are) then it is not ſo good a bedding, both becauſe the thickneſſe keepeth out the heat, and is long before it can be warmed; as alſo in that it ever being cold, naturally of it ſelf draweth into it a certain moiſture, which with the firſt heat being expelled in ſmoak, doth much offend and breed ill taſte in the *Malt*. There be others that bed the Kilne with a kind of *Mat* made of broad thinne ſplints of wood wrought Checker-wiſe one into another, and it hath the ſame faults which the thick *Mat* hath; for it is long in catching the heat, and will ever ſmoak at the firſt warming, and that ſmoak will the *Malt* ſmell on ever after; for the ſmoak of *wood* is ever more ſharp and peircing then any other ſmoak whatſoever.

Beſides, this *Woodden-Mat*, after it hath once bedded the Kiln, it can hardly afterward be taken up or removed; for buy continual heat, being brought to ſuch an extreame dryneſſe, if upon any occaſion either to mend the Kiln or cleanſe the Kiln, or do other neceſſary labour underneath the bedding, you ſhall take up the *woodden mat*, it would preſently crack, and fall to pieces, and be no more ſerviceable.

There be others which bed the Kiln with a bedding made all of *Wickers*, of ſmall wands folded one in another like a hurdle, or ſuch wand work; but it is made very open, every wand at leaſt two or three fingers one from another; and this kind of bedding is a very ſtrong kind of bedding, and will laſt longeth, and catcheth the heat at the firſt ſpringing, onely the ſmoak is offenſive, and the roughneſſe without great care uſed, will ſoon wear out your hair cloth; yet in ſuch places where *ſtraw* is not to be got or ſpared, and that you are compelled only to uſe *wood* for your fewel in drying your Malt, I allow this bedding before any other, for it is very good, ſtrong, and long laſting: Beſides, it may be taken up and ſet by at pleaſure, ſo that you may ſweep and cleanſe your Kilne as oft as occaſion ſhall ſerve, and in the neat and fine keeping of the Kiln, doth conſiſt much of the *Houſe-wives* Art; for to be choakt either with duſt, durt, ſoot or aſhes, as it ſhewes ſlottiſhneſs

tiſhneſs and ſloth, the onely great imputations hanging over a *Houſe-wife*, ſo likewiſe they hinder the labour, and make the malt dry a great deal worſe, and more unkindly.

Next the Bedding of the Kilne, our Malſter by all means must have an eſpeciall care with what fewel ſhe dryeth the Malt? for commonly, according to that, it ever receiveth and keepeth the taſte, if, by ſome ſpeciall Art in the Kiln, that annoyance be not taken away. To ſpeak then of fewels in general, there are of divers kinds according to the natures of ſoyles, and the accommodation of places in which men live; yet the beſt and moſt principal fewel for the Kilnes, (both for ſweetneſſe, gentle heat, and perfect drying) is either good Wheat-ſtraw, Rye-ſtraw, Barley-ſtraw, or Oaten-ſtraw; and of theſe the Wheat ſtraw is the beſt, becauſe it is moſt ſubſtantial, longeſt laſting, makes the ſharpeſt fire, and yields the leaſt flame; The next is Rye-ſtraw, then Oaten-ſtraw, and laſt Barley-ſtraw, which by reaſon it is ſhorteſt, lighteſt, leaſt laſting, and giveth more blaze than heat, it is laſt of theſe white ſtraws to be choſen; and where any of theſe faile or are ſcarce, you may take the ſtubble or after crop of them, when the upper part is ſhorn away; which being well dryed and houſed, is as good as any of the reſt already ſpoken of, and leſſe chargeable, becauſe it is not fit for any better purpoſe, as to make fodder, manure, or ſuch like, or more than ordinary thatching, and ſo fitteſt for this purpoſe. Next to theſe white ſtrawes, your long Fen Ruſhes, being very exceedingly well withered and dryed, and all the ſappy moyſture gotten out of them, and ſo either ſafely houſed or ſtacked, are the beſt fewel; for they make a very ſubſtantial fire and much laſting, neither are apt to much blazing, nor the ſmoak ſo ſharp or violent, but may very well be endured: where all theſe are wanting, you may take the Straw of Peaſe, Fetches, Lupins, or Tares, any of which will ſerve, yet the ſmoke is apt to taint, and the fire without prevention dryeth too ſodainly and ſwiftly. Next to theſe is clean Bean ſtraw, or ſtraw mixt of Beanes and Peaſe together; but this muſt be handled with great diſcretion, for the ſubſtance containeth ſo much heat, that it will rather burn than dry, if it be not moderated, and the ſmoke is alſo much offenſive

Of fewel for the drying of Malt.

offenſive. Next to this Bean ſtraw, is your Furs, Gorſe, Whins, or ſmall Bruſh-wood, which differeth not much from Bean ſtraw; onely the ſmoake is much ſharper, and tainteth the Malt with a much ſtronger ſavour. To theſe I may adde Braken or Brakes, Ling, Heath, or Broom, all which may ſerve in time of neceſſity, but each one of them have this fault, that they adde to the Malt an ill taſte or ſavour. After theſe I place wood of all ſorts, for each is a like noyſome, and if the ſmoke which commeth from it touch the Malt, the infection cannot be removed; from whence amongſt the beſt Husbands hath ſprung this Opinion, that when at any time drink is ill taſted, they ſay ſtraight, it was made of Wood dryed malt. And thus you ſee the generality of fuels, their vertues, faults, and how they are to be imployed. Now for Coale of all kindes, Turf, or Peate, they are not by any meanes to be uſed under Kilnes, except where the furnaces are ſo ſubtilly made that the ſmoak is conveyed a quite contrary way, and never commeth neere the malt; in that caſe it skilleth not what fuel you uſe, ſo it be durable and cheap, it is fit for the purpoſe; onely great regard muſt be had to the gentleneſſe of the fire, for, as the old Proverb is, (Soft fire makes ſweet Malt) ſo too raſh and haſty a fire ſcorcheth and burneth it, which is called among Malſters Firefangd; and ſuch Malt is good for little or no purpoſe: therefore to keep a temperate and true fire, is the only Art of a moſt skilfull Malſter.

When the Kiln is thus made, and furniſhed of all neceſſaries duely belonging to the ſame, you Malſters next care ſhall be to the faſhioning and making of the Garners, Hutches, or Holds, in which both the malt after it is dryed, and the Barly before it be ſteeped, is to be kept and preſerved; and theſe Garners or Safes for Corne are made of diverſe faſhions, and diverſe matters, as ſome of Boords, ſome of Bricks, ſome of Stone, ſome of Lime and Haire, and ſome of Mud, Clay, or Loame: but all of theſe have their ſeverall faults; for wood of all kinds breedeth Weevel and Wormes which deſtroy the Graine, and is indeed much too hot: for although malt would ever be kept paſſing dry, yet never ſo little overplus of heat withers it, and takes away the vertue; for as moiſture rots and

corrupts

corrupts it, ſo heat takes away and decayeth the ſubſtance. Brick, becauſe it is laid with Lime, is altogether unwholeſome; for the Lime being apt at change of weather to ſweat, moiſtneth the grain, and ſo tainteth it; and in the dryeſt Seaſons with the ſharp hot taſte, doth fully as much offend it: thoſe which are made of Stone, are much more noyſome, both in reſpect of the reaſons before rehearſed, as alſo in that all Stone of it ſelf will ſweat, and ſo more and more corrupteth the grain which is harboured in it. Lime and haire being of the ſame nature, carrieth the ſame offences, and is in the like ſort to be eſchewed. Now for Mudde, Clay, or Loame, in as much as they muſt neceſſarily be mixt with Wood, becauſe otherwiſe of themſelves, they cannot knit or bind together; and beſides, that the Clay or Loame muſt be mixt either with chopt hay, chopt ſtraw, or chopt Litter, they are as great breeders of Wormes and Vermine as wood is, nor are they defences againſt Mice, but eaſie to be wrought through, and ſo very unprofitable for any Huſband or Houſe-wife to uſe. Beſides, they are much too hot, and being either in a cloſe houſe, neere the Kilne, or the backe, or face of any other Chimney, they dry the Corn too ſore, and make it dwindle and wither, ſo that it neither filleth the buſhell, nor enricheth the Liquor, but turnes to loſſe every way. The beſt Garner then that can be made both for ſafety and profit, is to be made either of broken tile-ſhread, or broken bricks cunningly and eeven layd and bound together with Plaſter of Paris, or our ordinary Engliſh Plaſter, or burnt Alabaſter, and then covered all over both within and without, in the bottome and on every ſide, at leaſt three fingers thick with the ſame Plaſter, ſo as no bricke or tyle-ſhread may by any means be ſeen, or come neere to touch the Corne; and theſe Garners you may make as big, or as little as you pleaſe, according to the frame of your houſe, or place of moſt convenience for the purpoſe, which indeed would ever be as neere the Kilne as may be, that the ayre of the fire in the dayes of drying, may come unto the ſame, or elſe neere the backs or ſides of Chimnies, where the ayre thereof may correct the extream coldneſſe of the plaſter, which of all things that are bred in the earth, is the coldeſt

coldeſt thing that may be, and yet moſt dry, and not apt to ſweat or take moyſture, but by ſome violent extremity; neither will any worm or vermine come near it, becauſe the great coldneſſe thereof is a mortall enemy to their natures; and ſo the ſafeſt and longeſt, theſe Garners of plaſters, keep all kind of Grain and Pulſe in the beſt perfection.

The making of ceſterns.

After theſe Garners, Hutches, or large Keeps for Corn are perfitted and made, and fitly adjoyned to the Kiln, the next thing that our Maltſter hath to look unto, is the framing of the Fats or Ceſterns wherein the Corn is to be ſteeped: and they are of two ſorts, that is, either of Coopers work, being great Fats of wood, of elſe of Maſons work, being Ceſternes made of ſtone; but the Ceſtern of ſtone is much the better: for beſides, that theſe great Fats of Wood are very chargeable and coſtly (as a Fat to containe four quarters of Graine, which is but two and thirty buſhels, cannot be afforded under twenty ſhillings) ſo likewiſe they are very caſuall and apt to miſchance and ſpilling; for, and beſides their ordinary wearing, if in the heat of Summer, they be never ſo little neglected without water, and ſuffered to be over-dry, it is tenne to one but in the Winter they will be ready to fall in pieces; and if they be kept moyſt, yet if the water be not oft ſhifted and preſerved ſweet, the Fatte will ſoon taint, and being once grown faulty, it is not onely irrecoverable, but alſo whatſoever commeth to be ſteeped in it after, will be ſure to have the ſame ſavour; beſides the wearing and breaking of Garthes, and Plugs, the binding, cleanſing, ſweetning, and a whole World of other troubles and charges doth ſo daily attend them, that the benefit is a great deal ſhort of the incumbrance; whereas the ſtone Ceſtern is ever ready and uſefull, without any vexation at all; and being once well and ſufficiently made, will not need trouble or reparation, (more than ordinary waſhing) ſcarce in a hundred years.

Now the beſt way of making theſe Malt Ceſterns, is to make the bottoms and ſides of good tyle-ſhreads fixed together with the beſt Lime and Sand, and the bottom ſhall be raiſed at leaſt a foot and a half higher than the ground, and at one corner in the bottom, a fine artificiall round hole muſt be

be made, which being outwardly ſtopt, the Malſter may through it drain the Ciſtern dry when ſhe pleaſeth, and the bottom muſt be ſo artificially leveld and contrived, that the water may have a true deſcent to that hole, and not any remain behind when it is opened.

Now when the model is thus made of tile-ſhard, which you may doe great or little at your pleaſure: then with Lime, Hair, and Beaſts-blood mixed together, you ſhall cover the bottom at leaſt two inches thick, laying it level and plain, as is before ſhewed: which done, you ſhall alſo cover all the ſides and toppe, both within and without, with the ſame matter, at leaſt a good fingers thickneſſe, and the main wall of the whole Ciſtern ſhall be a full foot in thickneſſe, as well for ſtrength and durableneſſe, as other private reaſons for the holding the grain and water, whoſe poyſe and weight might otherwiſe endanger a weaker ſubſtance. And thus much concerning the Malt-houſe, and thoſe ſeveral accommodations which do belong unto the ſame.

I will now ſpeak a little in generall as touching the Art, ſkil, and knowledge of Malt making, which I have referred to the concluſion of this Chapter, becauſe whoſoever is ignorant in any of the things before ſpoken of, cannot by any meanes ever attain to the perfection of the moſt true, and moſt thrifty Malt-making. To begin then with the Art of making, or (as ſome terme it) melting of Malt, you ſhall firſt (having proportioned the quantity you meane to ſteep, which ſhould ever be anſwerable to the continent of your Ciſterne, and your Ciſterne to your floores) let it either runne downe from your upper Garner into the Ciſterne, or otherwiſe be carried into your Ciſterne, as you ſhall pleaſe, or your occaſions deſire; and this Barly would by all meanes be very clean and neatly dreſt; then when your Ciſtern is filled, you ſhall from your Pump or Well convey the water into the Ciſterne till all the Corn be drencht, and that the water float above it; If there be any Corn that will not ſink, you ſhall with your hand ſtir it about, and wet it, and ſo let it reſt and cover the Ciſtern; and thus for the ſpace of three nights, you ſhall let the Corn ſteep in the water. After the three

The manner how to make Malt.

nights expired, the next morning you ſhall come to the Ceſtern and pluck out the plug or bung-ſtick which ſtoppeth the hole in the bottom of the Ceſtern, and ſo drain the water clean from the Corn, and this water you ſhall by all meanes ſave, for much light Corn and others will come forth with this drain water, which is very good Swines meat, and may not be loſt by any good Houſ-wife. Then having drained it, you ſhall let the Ceſtern drop all that day, and in the evening with your ſhovel you ſhall empty the Corn from the Ceſtern unto the Malt-floore, and when all is out, and the Ceſtern cleanſed, you ſhall lay all the wet Corn on a great heap, round or long, and flat on the Top; and the thickneſs of this heap ſhall be anſwerable to the ſeaſon of the year; for if the weather be extream cold, then the heap ſhall be made very thick, as three or four foot, or more, according to the quantity of the grain: but if the weather be temperate and warm, then ſhall the heap be made thinner, as two foot, a foot and a half, or one foot, according to the quantity of the Grain. And this heap is called of Malſters a Couch or bed of raw Malt.

In this Couch, you ſhall let the Corn lye three nights more without ſtirring, and after the expiration of the three nights, you ſhall look upon it, and if you find that it beginneth but to ſprout, (which is called coming of Malt) though it be never ſo little, as but the very white end of the ſprout peeping out, (ſo it be in the outward part of the heap or couch) you ſhall then break open the couch, and in the middeſt where the Corn lay neereſt, you ſhall find the ſprout or Corn of a greater largeneſſe: then with your ſhovel you ſhall turn all the outward part of the couch inward, and the inward outward, and make it at the leaſt three or four times as big as it was at the firſt, and ſo let it be all that day and night, and the next day you ſhall with your ſhovel turn the whole heap over again, increaſing the largeneſſe, and making it of one indifferent thickneſſe over all the floore, that is to ſay, not above a handfull thick at the moſt, not failing after for the ſpace of fourteen dayes, which doth make up full in all three weeks, to turn it all over twice or thrice a day, according to the ſeaſon of the weather, for if it be warm, the Malt muſt be

turned

turned often; if cool, then it may lye looſer, thicker, and longer together, and when the three weeks is fully accompliſht, then you ſhall (having bedded your Kiln, and ſpread a clean hair cloth thereon) lay the malt as thinne as may be, (as about three fingers thickneſſe) upon the hair cloath, and ſo dry it with a gentle and ſoft fire, ever and anon turning the Malt (as it dryeth on the Kiln) over and over with your hand, till you find it ſufficiently well dryed, which you ſhall know both by the taſte, when you bite it in your mouth, and alſo by the falling off of the Come or ſprout, when it is throughly dryed. Now as ſoon as you ſee the Come begin to ſhed, you ſhall in the turning of the Malt, rubbe it well between your hand, and ſcowre it to make the Come fall away, then finding it all ſufficiently dryed, firſt put out your fire, then let the Malt cool upon the Kiln for four or five hours, and after raiſing up the four corners of the haire cloath, and gathering the Malt together on a heap, empty it with the Come and all into your Garners, and there let it lye (if you have not preſent occaſion to uſe it) for a moneth or two or three to ripen, but no longer, for as the Come or duſt of the Kiln, for ſuch a ſpace melloweth and ripeneth the Malt, making it better both for ſale or expence, ſo to lye too long in it doth ingender Weevel, Wormes, and Vermine, which doe deſtroy the grain. The drying of Malt.

Now for the dreſſing and cleanſing of Malt at ſuch time as it is either to be ſpent in the houſe, or ſold in the Market; you ſhall firſt winnow it with a good wind, either from the Aire, or from the Fan; and before the winnowing, you ſhall rub it exceeding well between your hands, to get the *Come* or *ſprouting* clean away: for the beauty and goodneſſe of malt is when it is moſt ſmug, cleane, bright, and likeſt to Barley in the view, for then there is leaſt waſte, and greateſt profit: for Come and duſt drinketh up the Liquor, and gives an ill taſte to the drink. After it is well rubb'd and winnowed, you ſhall then ree it over in a fine Sive, and if any of the malt be uncleanſed, then rub it againe into the Sive till it be pure, and the rubbings will ariſe on the Top of the Sive, which you may caſt off at pleaſure, and both thoſe rubbings from the Sive,

and the chaff, and duſt which commeth from the winnowings ſhould be ſafe kept; for they are very good Swines meate, and feed well, mixt either with Whey or ſwellings: and thus after the malt is ree'd, you ſhall either ſack it up for eſpecial uſe, or put it into a well cleanſed Garner, where it may lye till there be occaſion for expence.

Now there be certain Obſervations in the making of Malt, which I may by no means omit: for though divers opinions do diverſly argue them, yet as neer as I can, I will reconcile them to that truth, which is moſt conſonant to reaſon, and the rule of honeſty and equality.

Firſt, there is a difference in mens opinions, as touching the conſtant time for the mellowing and making of the Malt; that is, from the firſt ſteeping untill the time of drying; for ſome will allow both Fat and Floore hardly a fortnight, ſome a fortnight, and two or three dayes, and do give this reaſon.

Firſt, they ſay, it makes the Corn look whiter and brighter, and doth not get ſo much the ſulling and foulneſſe of the floore, as that which lyeth three weeks, which makes it a great deal more beautifull, and ſo more ſaleable: Next, it doth not come, or ſhoot out ſo much ſprout, as that which lyeth a longer time, and ſo preſerveth more heart in the grain, makes it bol'd and fuller, and ſo conſequently more full of ſubſtance, and able to make more of a little, than the other of much more.

Theſe reaſons are good in ſhew, but not in ſubſtantial truth: for (although I confeſſe that corne which lieth leaſt time on the floor, muſt be the whiteſt and brighteſt) yet that which wanteth any of the due time, can neither ripen, mellow, nor come to true perfection, and leſſe than three weeks cannot ripen Barley: for look what time it hath to ſwell and ſprout, it muſt have full that time to flouriſh, and as much time to decay, now in leſſe than a week it cannot doe the firſt, and ſo in a week the ſecond, and in another week the third; ſo that in leſſe than three weeks a man cannot make perfect Malt. Againe, I confeſſe, that malt which hath the leaſt Come, muſt have the greateſt Kernel, and ſo be moſt ſubſtantial; yet the Malt which

which putteth not out his full ſprout, but hath that moyſture (with too much haſte) driven in which ſhould be expelled, can never be Malt of any long laſting, or profitable for indurance, becauſe it hath ſo much moiſt ſubſtance as doth make it both apt to corrupt and breed worms in moſt great abundance. It is moſt true, that this haſty made Malt is faireſt to the eye, and will ſooneſt be vented in the market; and being ſpent as ſoon as it is bought, little or no loſſe is to be perceived; yet if it be kept three or four months or longer (unleſſe the place where it is kept, be like a hot-houſe) it will be ſo dank and give again, that it will be little better than raw Malt, and ſo good for no ſervice without a ſecond drying.

Beſides, Malt that is not ſuffered to ſprout to the full kindly, but is ſtopt as ſoon as it begins to peepe, much of that Malt cannot come at all; for the moiſteſt grains do ſprout firſt, and the hardeſt are longer in breaking the huſk; now, if you ſtop the grain on the firſt ſprouts, and not give all leiſure to come one after another, you ſhall have half Malt and half Barley, and that is good for nothing but Hens and Hogges trough. So that to conclude, leſſe than three weeks you cannot have to make good and perfect Malt.

Next, there is a difference in the turning of the Malt, for ſome (and thoſe be the moſt Men-malſters whatſoever) turne all their Malt with the ſhovel, and ſay it is more eaſie, more ſpeedy, and diſpatcheth more in an hour, then any other way doth in three; and it is very true, yet it ſcattereth much, behind unturn'd, and commonly that which was undermoſt it leaveth undermoſt ſtill, and ſo by ſome comming too much and others not comming at all, the Malt is oft much imperfect, and the old ſaying made good, *that too much haſte maketh waſte.* Now, there are others (and they are for the moſt part Women malſters) which turn all with the hand, and that is the beſt, ſafeſt, and moſt certain way; for there is not a grain which the hand doth not remove, and turn over and over, and layes every ſeveral heap or row of ſuch an even and juſt thickneſſe, that the Malt both equally commeth, and equally ſeaſoneth together without defect or alteration; and though he that

hath much Malt to make, will be willing to hearken to the ſwifteſt courſe in making, yet he that will make the beſt Malt, muſt take ſuch convenient leiſure, and imploy that labour which commeth neereſt to perfection.

Then there is another eſpecial care to be had in the comming or ſprouting of malt, which is, that as it muſt not come too little, ſo it muſt not by any meanes come too much, for that is the groſſeſt abuſe that may be ; and that which we call comed or ſprouted too much, is, when either by negligence, for want of looking to the couch and not opening of it, or for want of turning when the Malt is ſpread on the floor, it comes or ſprouts at both ends, which Husbands call Aker ſpierd : ſuch corn, by reaſon the whole heart or ſubſtance is driven out of it, can be good for no purpoſe but the Swine trough, and therefore you muſt have an eſpecial care both to the well tending of the couch, and the turning the Malt on the floore, and be ſure (as neer as you can) by the ordering of the Couch, and heaping the hardeſt grain inward and warmeſt, to make it all come very indifferently together. Now, if it ſo fall out, that you buy your Barly, and happen to light on mixt grain, ſome being old Corn, ſome new Corn, ſome of the heart of the ſtack, and ſome of the ſtaddle, which is an ordinary deceit with Husbandmen in the Market, then you may be well aſſured, that this grain can nevet come nor ſprout equally together, for the new corn will ſprout before the old, and the ſtaddle before that in the heart of the ſtack, by reaſon the one exceedeth the other in moyſtneſſe : therefore in this caſe you ſhall mark well which commeth firſt, which will be ſtill in the heart of the Couch, and with your hand gather it by it ſelf into a ſeparate place, and then heap the other together again : and thus as it commeth and ſprouteth, ſo gather it from the heap with your hand, and ſpread it on the floor, and keep the other ſtill in a thick heap till all be ſprouted. Now laſtly obſerve, that if your Malt be hard to ſprout or come, and that the fault conſiſt more in the bitter coldneſſe of the ſeaſon, than any defect of the Corn, that then (beſides the thick or cloſe making of the heap or couch) you faile not to cover it over with ſome thick woollen clothes, as coorſe Coverlids,

verlids, or ſuch like ſtuff, the warmth whereof will make it come preſently; which once perceived, then forthwith uncloath it, and order it as aforeſaid in all poynts. And thus much for the Art, Order, Skill, and Cunning, belonging to Malt making.

Now as touching the making of Oates into Malt, which is a thing of generall uſe, in many parts of this Kingdome where Barley is ſcarce, as in *Cheſhire*, *Lancaſhire*, much of *Darbiſhire*, *Devonſhire*, *Cornwall*, and the like, the Art and Skill is all one with that of Barley, nor is there any variation or change of work, but one and the ſame order ſtill to be obſerved; onely by reaſon that Oats are more ſwift in ſprouting, and apt to clutter, ball, and hang together by the length of the ſprout than Barley is, therefore you muſt not fail but turn them oftner than Barley, and in the turning be carefull to turn all and not leave any unmoved. Laſtly, they will need leſſe of the floor than Barley will; for in a full fortnight, or a fortnight and two or three dayes you may make very good and perfect Oat malt. But becauſe I have a great deal more to ſpeak particularly of Oates in the next Chapter, I will here conclude this, and adviſe every skilfull Houſewife to joyn with mine obſervations, her own tryed experience, and no doubt but ſhe ſhall find both profit and ſatisfaction. Of Oat-malt.

CHAP. VI.

Of the excellency of Oats, and the many ſingular vertues and uſe of them in a Family.

OAtes although they are of all manner of graine the cheapeſt becauſe of their generality, being a grain of that goodneſſe and hardneſſe, that it will grow in any ſoyl whatſoever, be it never ſo rich, or never ſo poor, as if nature had made it the onely loving companion and true friend to mankind; yet it is a graine of that ſingularity for the multiplicity of vertues, and neceſſary uſes for the ſuſtenance and ſupport of the family, that not any other grain is to be compared with it; for if any other have equal vertue, yet it hath not equal value, and if not equal value,

then it wants many degrees of equall vertue; ſo that joyning vertue and value together, no *Huſband, Houſe-wife or Houſ-keeper* whatſoever, hath ſo true and worthy a friend, as his Oats are.

The vertue of Oates to Cattell.

To ſpeak then firſt of the vertues of Oates as they accrew to Cattel and Creatures without doores, and firſt to begin with the Horſe, there is not any food whatſoever that is ſo good, wholſome and agreeable with the nature of a Horſe as Oats are, being a provender in which he taketh ſuch delight, that with it hee feedeth, travelleth, and doth any violent labour whatſoever, with more courage and comfort, then with any other food that can be invented, as all men know that have either uſe of it, or Horſes: neither doth the Horſe ever take ſurfeit of Oates (if they be ſweet and dry) for all be, he may well be glutted, or ſtalled upon them with indiſcreet feeding, and ſo refuſe them for a little time, yet he never ſurfeiteth, or any preſent ſickneſſe will follow after: whereas no other grain but glurs a Horſe therewith, and inſtantly ſickneſſe will follow, which ſhewes ſurfeit; and the danger is oft incurable: for we read in *Italy*, at the ſiege of *Naples* of many hundred Horſes that dyed on the ſurfeit of wheat; at *Rome* alſo dyed many hundred Horſes of the plague, which by due proof was found to proceed from a ſurfeit taken of peaſon, and fitches; and ſo I could run over all other graines, but it is needleſſe, and far from the purpoſe I have to handle; ſuffice it, Oats for Horſes are the beſt of all foods whatſoever, whether they be but onely clean threaſht from the ſtraw and ſo dryed, or converted to Oat-meal, and ſo ground and made into bread. Oats boyl'd, and given a Horſe whilſt they are cool, and ſweet, are an excellent food for any Horſe in the time of diſeaſe, poverty or ſickneſſe; for they ſcowr and fat exceedingly.

In the ſame nature that Oats are for Horſes, ſo are they for the Aſſe, Mule, Camel, or any other beaſt of burthen.

If you will feed either Oxe, Bull, Cow, or any Neat whatſoever to an extraordinary height of fatneſſe, there is no food doth it ſo ſoon as Oates do, whether you give them in the ſtraw, or clean threaſht from the ſheaf, and well winnowed; but the winnowed Oate is the beſt; for by them I have ſeen an Oxe, fed to twenty pounds, twenty four pounds, and thirty pounds, which is a moſt unreaſonable reckoning for any beaſt; only ſeam, and the tallow hath been precious.

Sheepe

Sheep or Goats may likewiſe be fed with Oates, to as great price and profit as with Peaſe, and Swine are fed with Oates either in raw Milk or otherwiſe, to as great thickneſſe as with any graine whatſoever; only they muſt have a few Peaſe after the Oats to harden the fat, or elſe it will waſte, and conſume in boyling. Now for holding Swine, which are onely to be preſerved in good fleſh, nothing is better then a thinne mange made of ground Oats, Whey, Butter-milk, or other ordinary waſh or ſwillings, which either the Dairy or Kitchin affordeth; nor is there any more ſoveraign or excellent meat for Swine in the time of ſickneſſe, then a mange made of ground Oates and ſweet Whey, warmed luke-warm on the fire, and mixt with the powder of Ruddle, or red Oaker. Nay if you will go to the matter of pleaſure, there is not any meat ſo excellent for the feeding, and wholſome keeping of a kennel of Hounds, as the Mange made of ground Oats and ſcalding water, or of beef broath, or any other broth, in which fleſh hath been ſodden; if it be for the feeding, ſtrengthning and comforting of Grey-hounds, Spaniels, or any other ſort of tenderer Doggs, there is no meat better than ſheeps heads, hair and all, or other intralls of Sheep chopt and well ſodden with good ſtore of oat-meal.

Now for all manner of Poultry, as Cocks, Capons, Hens, Chickens of great ſize, Turkeys, Geeſe, Ducks, Swannes, and ſuch like, there is no food feedeth them better than Oats, and if it be the young breed of any of thoſe kinds, even from the firſt hatching or diſcloſing, till they be able to ſhift for themſelves; there is no food better whatſoever then Oat-meal Groats, or fine Oat-meal, either ſimple of it ſelf, or elſe mixt with Milk, drink, or elſe new made Urine.

Thus much touching the vertues and quality of Oates or Oat-meal, as they are ſerviceable for the uſe of Cattel and Poultry. Now for the moſt neceſſary uſe thereof for man, and the generall ſupport of the family, there is no grain in our knowledge anſwerable unto it. Vertue of Oats for man.

Firſt for the ſimple Oat it ſelf (excepting ſome particular phyſick helps, as frying them with ſweet butter, & putting them in a bag, & very hot applyed to the belly, or ſtomack, to avoid collick or windines & ſuch experiments) the moſt ſpecial uſe which is made of them

is

is for Malt to make Beer or Ale of, which it doth exceeding well: and maintaineth many Towns and Countries; but the Oatmeal which is drawn from them, being the heart and kernel of the Oat is a thing of much rater price and eſtimation; for to ſpeak truth, it is like Salt of ſuch a general uſe, that without it hardly can any Family be maintained: therefore I think it not much amiſs to ſpeak a word or two, touching the making of Oat-meal. You ſhal underſtand then,

Making of Oat-meal.

that to make good and perfect Oat-meal, you ſhall firſt dry your Oats exceeding wel; & then put them on the Mil, which may either be water-mill, wind-mil, or horſe mill (but the Horſe-mill is beſt) & no more but cruſh or hull them; that is, to carry the ſtones ſo large that they may no more but cruſh the huſk from the Kernel: then you ſhall winnow the hulls from the Kernels either with the wind, or a Fan, and finding them of an indifferent cleanneſſe (for it is impoſſible to hull them all clean at the firſt) you ſhall then put them on again, and making the mill go a little cloſer, run them through the Mill again, and then winnow them over again, and ſuch Greets or Kernels as are clean hul'd, and well cut, you may lay by, and the reſt you ſhall run through the mill again the third time, and ſo winnow them again, in which time all will be perfect, and the Greets or full Kernels will ſeparate from the ſmaller Oat meal; for you ſhall underſtand, that at this firſt making of Oat meal, you ſhall ever have two ſorts of Oat-meales, that is, the full whole Greet or Kernel, and the ſmall duſt Oat-meal: As for the coorſe Hulls or Chaff that commeth from them, that alſo is worthy ſaving; for it is an excellent good Horſe provender for any plow or labouring Horſes, being mixt with either beans, peaſe, or any other pulſe whatſoever.

The vertues of Oatmeal.

Now for the uſe and vertues of theſe ſeverall kinds of Oat meals in maintaining the family, they are ſo many (according to the many cuſtoms of many Nations) that it is almoſt impoſſible to reckon all; yet (as near as I can) I will impart my knowledge, and what I have tane from relation.

Firſt, for the ſmall duſt, or meal Oat-meal, it is that with which all pottage is made and thickned, whether they be meat pottage, Milk pottage, or any thick, or elſe thinne Grewel whatſoever, of whoſe goodneſſe and wholſomneſſe it is needleſſe to ſpeak, in that it is frequent with every experience: Alſo, with this ſmall

meal

meal Oat-meal, is made in divers Countries ſix ſeverall kinds of very good and wholſome bread, every one finer than another, as your Anacks, Janacks, and ſuch like. Alſo there is made of it, both thick and thin Oaten cakes, which are very pleaſant in taſte, and much eſteemed: but if it be mixed with fine wheat-meal, then it maketh a moſt delicate and dainty Oat cake, either thick or thinne, ſuch as no Prince in the world but may have them ſerved to his Table: alſo this ſmall Oat-meal mixed with blood, and the Liver of either Sheep, Calfe, or Swine, maketh that pudding which is called the Haggas or Haggus, of whoſe goodneſſe it is in vain to boaſt, becauſe there is hardly to be found a man that doth not affect them. And laſtly, from this ſmall Oat-meal by oft ſteeping it in water and cleanſing it, and then boyling it to a thick and ſtiffe jelly, is made that excellent diſh of meat which is ſo eſteemed of in the weſt parts of this Kingdome, which they call Waſh-brew, and in *Cheſhire*, and *Lancaſhire* they call it Flamery, or Flumery, the wholeſomneſſe and rare goodneſſe, nay, the very Phyſick helps thereof, being ſuch and ſo many, that I my ſelfe have heard a very reverend and worthily renowned Phyſitian ſpeak more in the commendations of that meat, than of any other food whatſoever: and certain it is, that you ſhall not heare of any that ever did ſurfeit of this Waſh-brew or Flamery; and yet I have ſeene them of very dainty and ſickly ſtomacks which have eaten great quantities thereof beyond the proportion of ordinary meates. Now for the manner of eating this meat, it is of divers diverſly uſed; for ſome eat it with Honey, which is reputed the beſt ſauce; ſome with Wine, either Sack, Claret or White; ſome with ſtrong Beer, or ſtrong Ale, and ſome with Milk, as your ability, or the accommodations of the place will adminiſter.

Now there is derived from this Waſh-brew another coorſer meat which is as it were the dregges, or groſſer ſubſtance of the Waſh-brew, which is called Gird brew, which is a well filling and ſufficient meat, fit for ſervants and men of labour; of the commendation whereof, I will not much ſtand, in that is a meat of harder diſgeſtion, and fit indeed but for ſtrong able ſtomacks, and ſuch whoſe toyl and much ſweat both liberally

liberally ſpendeth evill humours, and alſo preſerveth men from the offence of fulneſs and ſurfeits.

Now for the bigger kind of Oat-meal, which is called Greets, or Corn Oat-meal, it is of no leſſe uſe than the former, nor are there fewer meats compounded thereof: for firſt, of theſe Greets are made all ſorts of puddings, or pots (as the Weſt Countrey tearms them) whether they be black, as thoſe which are made of the blood of Beaſts, Swine, Sheep, Geeſe, Red or Fallow Deer, or the like, mixt with whole Greets, Suet, and wholſome hearbs; or elſe white, as when the Greets are mixt with good Cream, Egges, Bread-crumms, Suet, Currants, and other wholſome Spices. Alſo of theſe Greets is made the good Friday pudding, which is mixt with Egges, Milk, Suet, Penny-royal; and boyl'd firſt in a linnen bag, and then ſtript and buttered with ſweet butter. Again, if you roaſt a Gooſe, and ſtop her belly with whole Greets beaten together with Egges, and after mixt with the Gravy, there cannot be a more better or pleaſanter ſawce: Nay, if a man be at Sea in any long Travel, he cannot eat a more wholſome and pleaſant meat then theſe whole Greets boyled in water till they burſt, and then mixt with butter, and ſo eaten with ſpoons, which although Seamen call it ſimply by the name of Loblolly, yet there is not any meat, how magnificent ſoever the name be, that is more toothſome or wholſome. And to conclude, there is no way or purpoſe whatſoever to which a man can uſe or imploy Rice, but with the ſame ſeaſoning and order you may imploy the whole greets of Oat-meal, and have full as good and wholſome meat, and as well taſted; ſo that I may well knit up this Chapter with this approbation of Oat-meal, that the little charge and great benefit conſidered, it is the very Crown of the Houſwifes Garland, and doth more grace her Table and her Knowledge, then all graines whatſoever; neither indeed can any Family or Houſhold be well and thriftily maintained, where this is either ſcant or wanting. And thus much touching the nature, worth, vertues, and great neceſſity of Oates, and Oat-meal.

CHAP.

CHAP. VIII.

Of the office of the Brew-house, and the Bake-house, and the necessary things belonging to the same.

WHen our *English House-wife* knowes how to preserve health by wholesome Physick, to nourish by good meate, and to cloath the body with warm garments, she must not then by any meanes be ignorant in the provision of bread and drink: she must know both the proportions and compositions of the same. And for as much as drink is in every house more generally spent than bread, being indeed, (but how well I know not) made the very substance of all entertainment; I will first begin with it, and therefore you shall know that generally our Kingdome hath but two kinds of drinks, that is to say, Beer and Ale, but particularly four, as Beer, Ale, Perry, and Cider; and to these we may adde two more, Meed, and Metheglin, two compound drinks of Honey and Herbs, which in the places where they are made, as in *Wales*, and the Marches, are reckoned for exceeding wholesome and cordiall. Diversities of Drinks.

To speak then of Beer, although there be divers kinds of tasts and strength thereof, according to the allowance of Malt, hopps, and age given unto the same; yet indeed there can be truly said to be but two kinds thereof, namely, Ordinary beer, and March beer, all other beeres being derived from them. Strong beer.

Touching ordinary beer, which is that, wherewith either Nobleman, Gentleman, Yeoman, or Husbandman, shall maintaine his Family the whole year, it is meet first that our *English House-wife* respect the proportion or allowance of Malt due to the same, which amongst the best *Husbands*, is thought most convenient; and it is held, that to draw from one quarter of good malt three hogsheads of beer, is the best ordinary proportion that can be allowed, and having age and good caske to lye in, it will be strong enough for any good mans drinking. Of ordinary beer.

Now for the brewing of ordinary beere, your malt being well Of brewing ordinary beer.

well ground, and put in your maſh-fat, and your Liquor in your lead ready to boyle, you ſhall then by little and little with ſcoopes or pailes put the boyling Liquor to the malt, and then ſtir it even to the bottom exceedingly well together, which is called the maſhing of the malt, then the Liquor ſwimming in the Top, cover all over with more malt; and ſo let it ſtand an hour and more in the maſh-fat, during which ſpace you may if you pleaſe, heat more Liquor in your lead for your ſecond or ſmall drink, this done, pluck up your maſhing ſtroam, and let the firſt Liquor runne gently from the malt, either in a clean trough, or other veſſels prepared for the purpoſe, and then ſtopping the maſh fat againe, put the ſecond Liquor to the malt, and ſtir it well together; then your Lead being emptied, put your firſt Liquor or wort therein, and then to every quarter of malt, put a pound and a halfe of the beſt Hops you can get, and boile them an houre together, till taking up a diſh full thereof, you ſee the Hops ſhrink into the bottom of the diſh; this done, put the wort thorow a ſtraight Sive, which may drain the Hops from it into your cooler, wich ſtanding over the Guile-fat, you ſhall in the bottom thereof, ſet a great bowl with your barm, and ſome of the firſt wort (before the Hoppes come into it mixt together) that it may riſe therein, and then let your wort drop or runne gently into the diſh with the barm which ſtands in the Guile-fat, and this you ſhall doe the firſt day of your brewing, letting your cooler drop all the night following, and ſome part of the next morning, and as it drops if you find that a black skum or mother riſeth upon the barm, you ſhall with your hand take it off, and caſt it away; then nothing being left in the cooler, and the Beer well riſen, with your hand ſtir it about, and ſo let it ſtand an houre after, and then beating it and the barme exceeding well together, tun it up into the Hogſheads, being clean waſh'd and ſcalded, and ſo let it purge; and herein you ſhall obſerve not to Tun your veſſels too full, for fear thereby it purge too much of the barm away: when it hath purged a day and a night, you ſhall cloze up the bung-holes with Clay, and onely for a day or two after, keep a vent-hole in it, and after cloze it up as faſt as may be. Now for your ſecond or ſmall

drink

drink which are left upon the graine, you ſhall ſuffer it there to ſtay but an hour, or a little better, and then drain it all off alſo; which done, put it into the Lead with the former Hops, and boyl the other alſo, then clear it up from the Hoppes and cover it very cloſe, till your firſt Beere be Tunned, and then, as before, put it alſo to barm, and ſo tunne it up alſo in ſmaller veſſels, and of this ſecond beer you ſhall not draw above one Hogſhead to three of the better. Now there be divers other wayes and Obſervations, for the brewing of ordinary beer; but none ſo good, ſo eaſie, ſo ready and quickly performed, as this before ſhewed; neither will any beer laſt longer, or ripen ſooner, for it may be drunk at a fortnights age, and will laſt as long and lively.

Of brewing the beſt march beer.

Now for the brewing of the beſt March Beere, you ſhall allow to a Hogſhead thereof, a quarter of the beſt Malt well ground; then you ſhall take a Peck of Peaſe, half a peck of Wheat, and half a peck of Oats, and grinde them all very well together, and then mixe them with your Malt; which done, you ſhall in all points brew this beer, as you did the former ordinary Beer; onely you ſhall allow a pound and a half of Hops to this one Hogſhead: and whereas before you drew but two ſorts of beer, ſo now you ſhall draw three; that is, a Hogſhead of the beſt, and a Hogſhead of the ſecond, and half a Hogſhead of ſmall beer, without any augmentation of Hops or Malt.

This March beer would be brewed in the months of *March* or *April*, and ſhould (if it have right) have a whole year to ripen in: it will laſt two, three, or four years, if it lie cool; and endure the drawing to the laſt drop, though with never ſo much leiſure.

Now for the brewing of ſtrong Ale, becauſe it is drink of no ſuch long laſting as beer is, therefore you ſhall brew leſſe quantity at a time thereof, as two buſhels of Northen meaſure, (which is four buſhels, or half a quarter in the South) at a brewing and not above, which will make fourteen gallons of the beſt Ale. Now for the maſhing and ordering of it in the maſh fat, it will not differ any thing from that of beer.

beer : as for Hops, although ſome uſe not to put in any, yet the beſt Brewers thereof will allow to fourteene gallons of Ale a good eſpen full of Hops and no more, yet before you put in your hops, as ſoon as you take it from the graines, you ſhall put it into a veſſel, and change it, or blink it, in this manner: put into the wort a handfull of Oak-boughes, and a pewter-diſh, and let them lye therein till the wort look a little paler than it did at the firſt, and then preſently take out the diſh and the leafs, and then boyl it a full houre with the hops, as afore-ſaid, and then cleanſe it, and ſet it in veſſels to cool; when it is milk-warme, having ſet your barm to riſe with ſome ſweet wort, then put all into the guile fat, and as ſoon as it riſeth, with a diſh or bowl beat it in, and ſo keep it with continuall beating a day and a night at leaſt, and after tun it. From this Ale you may alſo draw halfſo much very good middle Ale, and a third part very good ſmall Ale.

Brewing of bottle Ale.

Touching the brewing of Bottle-Ale, it differeth nothing at all from Brewing of ſtrong Ale, onely it muſt be drawne in a larger proportion, as at leaſt twenty gallons of half a quarter; and when it comes to be changed, you ſhall blink it (as was before ſhewed) more by much than was the ſtrong Ale, for it muſt be pretty and ſharp, which giveth the life and quickneſſe to the Ale: and when you tun it, you ſhall put it into round bottles with narrow mouthes, and then ſtopping them cloſe with cork, ſet them in a cold Cellar up to the waſte in ſand, and be ſure that the corks be faſt tied in with ſtrong packthread, for fear of riſing out, or taking vent, which is the utter ſpoyl of the Ale.

Now for the ſmall drink ariſing from this bottle-Ale, or any other Beer or Ale whatſoever, if you keep it after it is blinck'd and boyled in a cloſe veſſel, and then put it to barm every morning as you have occaſion to uſe it, the drink will drink a great deal the freſher, and be much more lively in taſte.

Of making Perry or Cider.

As for the making of Perry and Cider, which are drinks much uſed in the Weſt parts, and other Countries well ſtored with fruit in this Kingdome; you ſhall know that your

your Perry is made of Pears only, and your Cider of Apples; and for the manner of making thereof, it is done after one faſhion, that is to ſay: After your Pears and Apples are well pick'd from the ſtalks, rottenneſſe, and all manner of other filth, you ſhall put them in the Preſſe-mill, which is made with a Mil-ſtone running round in a circle, under which you ſhall cruſh your Peares or Apples, and then ſtraining them thorow a bag of hair-cloth, tun up the ſame, (after it hath been a little ſetled) into Hogſheads, Barrels, and other cloſe veſſels.

Now after you have preſt all, you ſhall ſave that which is within the hair-cloth bag, and putting it into ſeverall veſſels, put a pretty quantity of Water thereunto, and after it hath ſtood a day or two, and hath been well ſtirred together, preſſe it alſo over again, for this will make a ſmall Perry or Cider, and muſt be ſpent firſt. Now of your beſt Sider, that which you make of your Summer or ſweet fruit, you ſhall call Summer, or ſweet Sider, or Perry, and that you ſhall ſpend firſt alſo; and that which you make of the Winter, and hard fruit, you ſhall call Winter, and ſowre Cider, or Perry, and that you may ſpend laſt, for it will endure the longeſt.

Thus after our *Engliſh Houſe-wife* is experienc'd in the brewing of theſe ſeveral drinks, ſhe ſhall then look into her Bake-houſe, and to the making of all ſorts of bread, either for maſters, ſervants, or hinds, and to the ordering and compounding of the meal for each ſeveral uſe. Of Baking.

To ſpeak then firſt of meales for bread, they are either ſimple or compound; ſimple, as Wheat, and Rye, or compound, as Rye and Wheat mixt together, or Rye, Wheat, and Barley mixt together; and of theſe the oldeſt meal is ever the beſt, and yieldeth moſt, ſo it be ſweet, and untainted; for the preſervation whereof, it is meet that you cleanſe your meal well from the bran, and then keep it in ſweet veſſels. Ordering of Meal.

Now for the baking of bread of your ſimple meales, your beſt and principal bread is Manchet, which you ſhall bake in Baking Manchets.

this manner : Firſt, your Meale being ground upon the black ſtones, if it be poſſible, which makes the whiteſt flower, and boulted through the fineſt boulting cloath, you ſhall put it into a clean Kimnel, and opening the flower hollow in the midſt, put into it of the beſt Ale barm, the quantity of three pints to a buſhel of Meale, with ſome ſalt to ſeaſon it with; then put in your Liquor reaſonable warm, and knead it very well together with both your hands, and through the brake, or for want thereof, fold it in a cloath, and with your feet tread it a good ſpace together, then letting it lye an hour or thereabouts to ſwel, take it forth and mould it into Manchets round and flat, ſcotch them about the waſte to give it leave to riſe, and prick it with your knife in the Top, and ſo put it into the Oven, and bake it with a gentle heat.

To bake the beſt cheat bread, which is alſo ſimply of Wheat onely, you ſhall after your meal is dreſt and boulted through a more coorſe boulter than was uſed for your Manchets, and put alſo into a clean Tub, Trough, or Kimnel, take a ſowre Leaven, that is, a piece of ſuch like Leaven ſaved from a former batch, and well fill'd with ſalt; and ſo layd up to ſowre; and this ſowre Leaven you ſhall break into ſmall pieces into warm water, and then ſtrain it, which done, make a deep hollow hole, as was before ſaid, in the midſt of your flower, and therein poure your ſtrained Liquor, then with your hand mixe ſome part of the flower therewith, till the Liquor be as thick as a Pancake batter, then cover it all over with meale, and ſo let it lye all that night, the next morning ſtirre it, and all the reſt of the Meale well together, and with a little more warm water, barm, and ſalt to ſeaſon it with, bring it to a perfect Leaven, ſtiffe and firme; then knead it, break it, and tread it, as was before ſaid in the Manchets, and ſo mould it up in reaſonable bigge Loaves, and then bake it with an indifferent good heat : and thus according to theſe two examples before ſhewed, you may bake Leavened or unleavened bread whatſoever, whether it be ſimple Corn, as Wheat or Rye of it ſelf; or compound Grain, as Wheat and Rye, or Wheat and Barley,

Barley, or Rye and Barley, or any other mixt white Corn; only becauſe Rye is a little ſtronger Grain than Wheat, it ſhall be good for you, to put your water a little hotter than you did to your Wheat.

For your brown bread, or bread for your hinde-ſervants, which is the coorſeſt bread for mans uſe, you ſhall take of Barley two buſhels, of Peaſe two pecks, of Wheat or Rye a peck, a peck of Malt: theſe you ſhall grind all together, and dreſſe it through a Meale ſive, then putting it into a ſowre trough, ſet Liquor on the fire, and when it boyles, let one put in the water, and another with a maſh rudder ſtirre ſome of the flower with it after it hath been ſeaſoned with ſalt, and ſo let it be till the next day, and then putting to the reſt of the flower, work it up into ſtiffe leaven, then mould it, and bake it into great Loaves with a very ſtrong heat; now if your trough be not ſowre enough to ſower your Leaven, then you ſhall either let it be longer in the trough, or elſe take the help of a ſowre Leaven with your boyling water; for you muſt underſtand, that the hotter your Liquor is, the leſſe will the ſmell or rankneſſe of the Peaſe be perceived. And thus much for the baking of any kind of bread, which our *Engliſh Houſe-wife* ſhall have occaſion to uſe for the maintenance of her family.

As for the generall Obſervations to be reſpected in the Brew-houſe, or Bake-houſe, they be theſe. Firſt, that your brew-houſe be ſeated in ſo convenient a part of the houſe, that the ſmoke may not annoy your other more private rooms; then that your furnace be made cloſe and hollow for ſaving fewel, and with a vent for the paſſage of ſmoke, leſt it taint your Liquor; then that you prefer a Copper before a Lead, next that your Maſh-fat be ever neareſt to your Lead, your cooler nearer your Maſh-fat, and your Guil-fat under your Cooler, and adjoyning to them all ſeverall clean tubs to receive your Worts and Liquors: then in your Bake-houſe, you ſhall have a fair boulting-houſe, with large pipes to boult Meale in, fair troughs to lay Leaven in, and ſweet ſafes to receive your bran; you ſhall have Boulters, Searſes, Ranges, and Meale-ſives of all ſorts, both fine and coorſe; you ſhall have

have fair Tables to mould on, large Ovens to bake in, the ſoales thereof, rather of one or two intire ſtones, than of many bricks, and the mouth made narrow, ſquare, and eaſie to be cloſe covered: as for your peeles, cole-rakes, maukins, and ſuch like, though they be neceſſary, yet they are of ſuch generall uſe they need no further Relation. And thus much for a full ſatisfaction to all the *Husbands* and *House-wives* of this Kingdome, touching Brewing, Baking, and all whatſoever elſe appertaineth to either of their Offices.

The End of the English House-wife.



FINIS.

THE INRICHMENT Of the VVeald of KENT.

OR

A Direction to the Husbandman, for the true Ordering, Manuring, and Inriching of all the Grounds within the Wealds of *Kent*, and *Sussex*; and may generally serve for all the Grounds in England of that Nature: As

1. *Shewing the nature of Wealdish Ground comparing it with the soyle of the Shires at large.*
2. *Declaring what the Marle is, and the several sorts thereof, and where it is usually found.*
3. *The profitable use of Marle, and other rich manuring, as well in each sort of Arable Land, as also for the increase of Corn and Pasture through the Kingdome.*

Painfully gathered for the good of this Island, by a man of great Eminence and Worth, but revised, inlarged, and corrected with the consent, and by conference with the first Author.

By *G. M.*

LONDON,
Printed by *William Wilson*, for *George Sawbridge*, at the Bible on Ludgate-hill, neer Fleet-bridge. 1660.

THE JUDGEMENT
Of the Weald of
KENT
OR
A Direction to the Husbandman, for
the true Ordering, Manuring, and Inclosing of
all the Ground in the Weald of Kent, and
to reform all the Grounds
in the Inclosures of Pasture, Arable, and Coppice-wood
throughout the Kingdom. As
also for the Ordering of Timber-trees, for
Building of Houses, Ships, Bridges, Keys, and
Water-works. And for the Ordering of Woods,
Parks, Chases, and Forests, for the good of this Island, by a true
Observation and Experience of many Years.

By G. M.

LONDON,
Printed by William Wilson, for George Sawbridge, at the Bible on Ludgate-hill,
over Fleet-bridge. 1650.

TO THE HONOURABLE Knight, *Sir GEORGE RIVERS* of *Chafford*, in the County of *KENT.*

SIR,



Had I no Scale (more than this bare and plain moulded Epistle,) by which to come to your worthy eares, yet in respect of the honest livery which it carries, (being necessary and husbandly Collections, especially gathered for the Country and Soyl wherein you live) I know it cannot chuse but find both favour and mercy in your acceptions; but when I call into my consideration the great worthiness of your expence in this and all other the like affairs, which tend to the general benefit of the Common-wealth, and weigh the Excellency of your Wisdome, Judgment, Bounty, and Affection unto Hospitality (which giveth both strength and advancement to projects of this nature) I could not but take unto my self a double incouragement, and boldly say unto this Work which I offer unto your goodnesse, Go and approach with all thy sweetness before him, he that so perfectly knows all which thou canst or wouldst discover; he that is able both to correct and a-

mend any thing that is imperfect in thee, hee, for vertues ſake, will never forſake thee. Believe me (worthy Sir) ſhould this Subject wiſh it ſelf a Patron, I do not think it could wiſh beyond you; for you are a volume full of all that of which it intreateth: witneſs your yeares, your ſupportation of the poor, and your continuall imployment; with any of which there is not (of your ranke) a ſecond living in your Country, to walk hand in hand with you. Bring then (dear Sir) the oldeſt and beſt friend to your Country, forſake neither, nor this which comes to ſerve it; and though in this Glaſs ſome lineaments may appear imperfect, yet by the help of your favour (though little be exact, or moſt excellent) nothing ſhall be groſs or unworthy the ſurvey of your worthier patience. And ſo I reſt,

Yours to be commanded

Gervaſe Markham.

A Diſcourſe of the Weald of Kent; *and a compariſon of Arable lands therein, with the other parts of the Shires. Together with ſome neceſſary counſels for the ordering and inriching of the marleable Lands in the Weald, as generally in any part of this Kingdome.*

THe Weald of *Kent*, is the lower part of that ſhire, lying on the South ſide thereof, and adjoyneth to the Weald of *Suſſex*, to the weſt. Further Additions.

The Weald, both in *Kent* & *Suſſex*, was ſometimes all (or the moſt part) woody, Wild, and (in the firſt times) un-inhabited, and from thence took the name of Weald from the *Saxon* word, *Weale*, or *Yeale*, or *Weald*, which ſignifieth a Woody Country, or Forreſt like ground. The *Britans* called it *Andred*, which ſignifieth Greatneſſe or Wonderfull, and in Latine it was called *Saltus Andred*, (that is to ſay) the Chaſe or Forreſt of *Andred*, by reaſon of the great circuit, or large bounds thereof.

Touching the true boundary or limits of this Weald, there have been divers opinions, and moſt of them various, and much differing both in place and quantity, but that which is the neereſt & beſt allied unto truth both according to the opinions of *Aſſerius Menevenſis*, *Henry of Huntingdon*, and others of moſt credible report, is, that it extendeth from the City of *Winchelſey* in *Suſſex* an hundred and twenty miles in length towards the Weſt; and thirty miles in breadth towards the North. Now although this report be moſt agreeing unto verity, yet who knowes not that curioſity may raiſe up many objections to withſtand it: and therefore Mr. *Lambert* in his Perambulation of *Kent*, hath preſcribed the beſt and moſt infallible way to find out the true and

certain bounds of this Weald, to be onely by Jury, or the Verdict of twelve men impannelled for that purpose, either in case of controversie, or other particular search; and this hath been in these latter times brought forth most plentifully: for it hath been found by diverse late Verdicts, upon speciall and most necessary occasions, than the Weald of *Kent* is truly, Mr. *Lambert's* second step in his Perambulation of *Kent*, reaching from *Winchelsey* in *Sussex*, and that hill there, unto the top of *Rivers* Hill in *Kent*; and neither farther towards *London*, nor shorer towards *Tunbridge*; which agreeth so perfectly with the former limitations, that both may be received as most true and sufficient.

This Weald was for many yeares held to be a Wild Desart, or most unfruitfull Wildernesse (as write the authors before mentioned) and indeed such is the nature and disposition of the soyl thereof to this very day: for it will grow to frith or wood, if it be not continually manured and laboured with the plough and kept under by tillage; so as it may truly be said of it, *Incultæ reparantur vomere Sylvæ*. It is throughout (except in very few places adjoyning to brooks or Rivers) of a very barren nature, and unapt either for pasturage or tillage, untill that it be holpen by some manner of comfort, as dung, marle, fresh earth, fodder, ashes, or such other refreshings; and that seemeth to have been the cause for which in old time it was used as a Wilderness, and kept for the most part with herds of Deer, and droves of hogs as is specified in divers historical relations.

And as there be yet remaining in *Sussex* divers great forrest and sundry commons or wasts, having five or six miles in length, which for the most part are not fit to be manured for Corn, and yeeldeth but little profit in pasture; so have there been also in *Kent* (within our memory) a great number of woody and over grown ground, converted of late, even after such a manner as in the said Perambulation is testified; where it is said; That although the Weald of *Kent* belonged to sundry known owners long since, yet was it not then allotted into particular Tenancies, as the other parts of the shire were, but it was, in processe of time, by little and little gained; as men were contented to inhabit there, and to rid it of the wood. And hereof it is also, that besides sundry whole parishes which

be

be named dens or low places, as *Tenderden*, *Malden*, *Beneden*, and ſundry other, there be moreover many ſmaller portions almoſt in every part of the Weald of *Kent*, which be likewiſe called Dens; as the Den of *Cranebrook* in *Cranebrook*, the Den of *Hawkhurſt* in *Hawkhurſt*, and ſuch others; the which (as it ſeemeth) were at the firſt undertaken to be manured by ſundry particular perſons, whoſe names were then taken for thoſe very Dennes and continued many yeares together, as by antient evidences it doth yet appear, howſoever the age of long time hath now almoſt worn and conſumed them all out of knowledge. Neither doth the Weald of *Kent* contain ſo many great mannors or courts (for the proportion of the largeneſſe) as the reſt of the Shire doth, but was appertaining, for a great part thereof, to ſundry of thoſe mannors which do lye at large diſperſed thorow the Shire, whereof each one had a great portion in the Weald, which both in the book of Doomes-day, and in ſundry the court-Rolls, and Rentals, paſſeth by the name of Weald, and *Silva Porcorum*, or ſwine gats, which were granted to divers of the farmers and owners of ſundry tenancies which did belong unto thoſe dens and other Lands within the Weald.

And albeit theſe dennes be for the moſt part good large portion of lands, that be now broken into many ſeveral poſſeſſions, ſo as the ſame one Denne ſufficieth twenty Houſholders at this day, yet it is very likely that each man at the firſt had his ſeveral Denne wholly and unbroken, whereof he and his poſterity beareth name, untill that the ſame was by the cuſtome of *Gavelkind*, by ſale or by exchange divided and diſtributed amongſt others into parts, as we do now ſee them. But howſoever this Weald be of it ſelf unfruitfull (as I ſaid) and of a barren Nature, yet ſo it hath pleaſed the providence of the Almighty to temper the ſame, that by the benefit of Margle or Marle (as it is commonly called) it may be made not onely equal in fertility with the other grounds of the ſhire, as well for corn as Graſs, but all ſuperiour to the more and greater part of the ſame. The which manner of bettering the ground is not now newly diſcovered, but was the ancient practiſe of our forefathers many years agoe, as by the innumerable Marl pits digged and ſeen ſo many yeares paſt, the trees of 200, or 300. years

The uſe of Marl is ancient.

Marling was discontinued and is now revived.

years old, do now grow upon them, it may most evidently appear; besides the which we have mention of Marle in books of gainage or husbandry, that were written in the daves of K. *Edward* the 2d. or before, howbeit the same manner of tillage, by means of the civil Warrs, maintained many yeares as well in the time of the Barons warrs, as of the warrs between the house of *York*, and the family of *Lancaster*, was so given over, and gone out of use, untill these thirty or forty years, that it may be said to have been then newly born and revived, rather than restered; because the very true art of inriching the ground by Marle, seemeth to lye hidden in part, as yet not to be discovered to the full: for in this short time we have seen many arable grounds, which for sundry years after the marling of them, have plentifully born Wheat and other grain, to be now become unfruitfull, and so will they continue, albeit they should be now marled again. And this commeth to passe by the ignorance of the right manner of ordering the Marle, which is as strong and cheerfull as ever it was before, howsoever it worketh not this natural effect, through the unskilfulnesse of the Husbandman, that both wasteth the Marl, and loseth withall his time, his labour, his cost, and the profit of his ground. I cannot deny but a man shall see some grounds of nature fit to take Marl, and of situation so neer to Marl-pits long time opened, that they might be marled plentifully with little charge, and have been heretofore marled indeed, and yet the same to lye now unplowed, and not only barren of themselves, but also unapt for marle, and uncapable of amendment by tillage: but I must say withall, that albeit the men in those former ages had the right ordering of Marl, yet were they not all good Husbands alike, neither doth the field joy alike under the Farmer, and under the very Owner of the same, the one seeking the very uttermost gain that may be made during his short interest, and the other indeavouring to perpetuate his commodity, even to the end of his estate, which hath no end at all: so that through unskilfulnesse of the one, and greedinesse in others, the ground may sooner be crammed to death with Marle, then it shall be made the better or fatter by it. The reason whereof I will reserve untill that I have cause to teach in particular after what manner

ner and meaſure the ground is to be marled. In the mean while I will open the nature and conditions of this Wealdiſh ground, comparing it with the Soyl of the ſhire at large, and afterward declare unto you what the Marl is, and what ſorts thereof there be uſually found in the Weald of *Kent*, and laſtly enter into the true and profitable uſe thereof, as well in each ſort of arable Land, as alſo for the increaſe of Corn and Paſture through the Kingdome.

The arable ground of this Weald hath commonly a fleet and ſhallow mould to be turned up by the Plough, ſo as in many places the dead earth or mould is within three inches of the face of the ground, and in the beſt places, the good Mould exceedeth not ſix inches in depth at the moſt; and therefore, it wanteth convenient ſubſtance to nouriſh Corn any long time, but will faint and give over after a crop or two; for the which reaſon alſo, it cannot yield any ſweet or deep graſs. Beſides this, the Weald hath many copped or hilliſh grounds, out of which there do many Quits or Springs of water iſſue, that make it cold and barren; and from theſe hillocks, the beſt part of the good Mould is waſhed down into the Water courſes and Dykes that be made to divide and drain the Land. Furthermore the Weald is divided into many ſmall incloſures, the biggeſt ſort (for the moſt part) of which, are between ſixteen Acres and twelve in quantity, and thereby hath it many Hedges and Trees, which in unſeaſonable weather do keep both the Sunne and Wind from the Corn, ſo as for want of that ſuccour and comfort, it groweth and many times rotteth in the earth, ſo that it cometh not, nor eareth, nor proſpereth not kindly many times. And theſe ſmall Cloſes are cauſed by this, that, men are not able to Marle any great part or quantity of ground at once; and having marled a little, they are deſirous to ſow it with Corn: for the preſervation whereof, as alſo for draining it, they are inforced to make ſo many and ſmall ſeveralls: for all which reaſons it is plain, that there is little good arable Land there, and rarely any good Paſture, thoſe onely places excepted, which are amended by irrigations of floods, which there is called flowing and over-flowing. Contrarywiſe, the arable land of the Shire at large, hath a deep and fat Mould of good earth, that is

able to bear five or ſix good Crops together, without intermiſſion; and after 3. or 4. years reſt, will do the like again, and may ſo interchangeably keep that courſe for ever: yea, there be many grounds that are ſowed without ceaſing, becauſe the Mould is ſo deep, that when the upper part thereof beginneth to faint and be weary, men can adde ſome ſtrength of Cattell, and with the Plough go deeper, and fetch up a freſh Mould that will continue for a long ſeaſon. Furthermore this arable ground is a hollow dry ground, for the moſt part, on a deep Clay, that by tillage, and the weather, will become dry and ſpongy, ſo as the Rain there waſheth in the fat of the earth, the rather becauſe it is not ſo hilliſh and ſliding as the Weald, but more levell, caven, and Champion alſo, by which the Sunne and Wind do dry the Corn, and do make it carn or eare well, and yield a purer flowre then that which is ſobbed in wet, and hath long time lyen before it be dried again. But for as much as the great odds between theſe two ſorts of grounds, may be made even by the help of *Marl*, if it be rightly ordered, as I ſaid, I will not ſhew you what it is, and how many ſorts thereof be found in this Weald of our Country. *Marl* is indeed, as it is in name, the fat or (marrow) of the earth: for ſo did the *Germans*, and ſo did our elders the *Saxons* terme it, of the word *Marize* which we found *Marrow*, and thereof we call it *marling*, when we beſtow that fat earth upon our lean ground. *Plinie* ſaith, that the *Britains* (meaning us) did uſe to amend their Land with a certain invention which they called *marga*, that is, the fat of the earth, and it is to be ſeen in *Conradus Heresbachius*, that the *Germans* doe uſe it to the ſame end, and do call it by the ſame name till this very day: it is therefore a fat, oyly and unctuous ground, lying in the belly of the earth, which is of a warm and moiſt temperature, and ſo moſt fertill; ſeeing that heat and moiſture be the father and mother of generation and growth; howbeit this is not a pure and ſimple marrow (as that is which lyeth in our bones) but a juyce, or fat liquor mingled with the earth; as is the fat which lyeth mixed, and diſperſed in our fleſh, ſo as the one may be drawn away, and the other remain as it ſhall anon appear unto you.

Four ſorts of Marle.

Four ſorts of *Marle* be found in this Weald, known after-

der

der by the difference of colours, and thereby alſo differing in degrees of goodneſſe one from the other: for there is a gray, a blew, a yellow, and red Marle, all which be profitable, if they be earthy and fat, or ſlippery as ſoape: and moſt times little worth, if they be mixed with ſand, gravell, or ſtone. So the blew is reputed the beſt, the yellow the next, the gray the next, and the red leſſe durable then the other three; and yet it is thought the red to be the better, if it be found upon the blew, or others. Theſe Marles do lye in veins or flowers, amongſt thoſe hillocks or copped grounds moſt commonly, whereof I have ſpoken, and do oftentimes ſhew themſelves at the foot of the hill, or about the mid way, between the foot and the top thereof: ſome of them have over them a cover of ground, which we call Cope, not exceeding ſeven or eight foot in depth, ſome lye deeper, and other ſome do ariſe, as namely, where the ground lyeth not high, and that Marle commonly is very good; and there is in diverſe levell grounds good Marle. 1. 2. 3. 4.

And as Marle is for the moſt part of theſe four colours, ſo is arable ground for the moſt part of theſe four ſort following; that is to ſay, either a cold, ſtiffe and wet clay which is either the Cope of the Marle, or lyeth neer unto it, and is therefore commonly called, *The Marle Cope ground*, or a Hazell Mould, which I count to be one of the beſt wealdiſh Moulds, being a compound Mould, and very good for Marle, and will quit the coſt very well. Then there are two ſorts of ſandy Mould, the one being a reaſonable good kind, but not equall to the hazell Mould, for you ſhall have in divers places of the Weald, this hazell mould to bear two or three good crops of Wheat, being Summer fallowed, together, which you ſhall hardly have of any ſandy ground without mending: but as I ſaid of the better ſort of theſe two kinds of ſandy moulds, you have commonly very rich Wheat, being well Marled, which is not ſo barren as the other; but this laſt kind of ſandy Mould is a very barren kind of ground, and hath a very fleet Mould, and you ſhall have very heath grow upon it in divers places, and yet being ordered, as followeth, with Marle, will bear both good Corn Four ſorts of Grounds. 1. 2. 3. 4.

and Paſture. And now that we may the better underſtand how to Marl and Manure every of theſe ſorts by it ſelf, you muſt know, that the hazell ground being dry, and not ſubject to Winter-ſprings, or tears of water, (for which, ſome call ſuch, A whining or weeping ground) is to be handled thus.

The ordering of the Hazell-Mould.

Firſt, Plough it as deep as you can, with the ſtrength of eight beaſts at the leaſt; and be not afraid to Plough up ſome part of the dead earth that lyeth under the upper good Mould: for the Sun, the Rain, the Wind, and the Froſt, will in time mellow and amend it; and beſides that, the Mould will be the deeper for a long time after, and thereby keep it ſelfe the longer from being ſtiffened with the Marle. Then you may beſtow 500. Cart-loads (as we call them) of Marle upon each acre thereof, every load containing 10. or 12. buſhels of eight gallons, and each acre containing 160. rods of 16. foot and a half to a rod. Then alſo you may chuſe whether at the firſt breaking up you will ſow it with Oates, to kill the graſſe, or elſe firſt Marle it, and ſow it with Wheat, or otherwiſe Summer-fallow it in the *May* after the Oates, and then Marle it, and ſow it with Wheat. Upon that fallow or gratten, (as we call it) you ſhall do well to ſow it with Peaſe, and at *Michaelmas* following, to ſow that Peaſe-ſtubble or gratten with Wheat again, which alſo will be the better, if the Summer wherein it carried Peaſe, were moiſt; becauſe the Peaſe being rich and thick, do deſtroy the Graſſe, that together with the waſhing of the fallowes by rain, doth greatly conſume the heart and vertue; or, as we call it, the ſtate of the ground. But if that Summer were dry, then is a fallow beſt, becauſe the Sunne with his heat doth much good to the ground, and inableth it the better to bear out the weather in the Wheat ſeaſon enſuing. If you like to ſow it, as I ſaid, with Peaſe, ſow them as earely and timely as you may, for they will be ſo much the ſooner harveſted, and then alſo you may Plough or ſtirre your gratten the ſooner, whereby it will be the better hardned to bear out the weather in the time of ſowing of your Wheat: but I doubt, Peaſe doth ſomewhat ſtiffen it. Two buſhels of Wheat do ſuffice for the ſowing of an acre hereof, except it be for the firſt crop, after the

the new breaking up of the ground; during which time, there is found a worm, called an *Emble*, which in *French* ſignifieth Corn in the ground, being of colour yellow, and of an inch in length, and will eat ſome part of the Corn; but if you ſow it thick, it will be both ſmall eared, and thick, and ſlender of ſtraw, which the Rain and Wind will beat and hurle down, and then it will ſcarcely riſe again; or if it do, yet through the neerneſſe of the ſhadow of the Trees and Hedges, that in ſo ſmall cloſes be many, it will rather rot for want of drying, then come to maturity, that is, to perfect hard, and full grown Corn. After your firſt Mailing, you muſt carefully fore-ſee, that you plough not the ground either with deep or broad Furrowes, but fleet and narrow, leſt you caſt your Marl into the dead Mould, for Marl differeth much from Dung in this behalfe; Dung ſpendeth it ſelfe upward, and howſoever deep it lye, the vertue thereof will aſcend: but Marle, (as ſaith Sir *Walter Henly*, in his Husbandry) ſendeth his vertue downward, and muſt therefore be kept aloft, and may not be buried in any wiſe. Furthermore, if your ground be hilliſh or coppied, it ſhall be fit that you make your Ridges 7. or 8. foot broad at the leaſt; for in ſuch falling Lands, the more broad Furrowes you make, as you muſt make many, where you make Ridges, the more of your Marle ſhall be waſhed, and carried into the bottoms. It is good alſo to draw a croſſe or quarter-Furrow, and opening the ends of your land Furrowes ſtopped, into it, to leave the other ends of your Furrowes, that the water-ſhoot runne not all the length of the field. Again, this ground will alwaies be ſown under furrow, and that alſo before *Michaelmas*, if the ſeaſon will ſo permit: for this ground (if it be well husbanded) will be mellow and hollow, or looſe, whereby though Rain and Froſt, it would ſinke down from the root of the Wheat, if it ſhould be ſown above Furrow, the which being uncovered, muſt needs be bitten and killed with the cold. It is alſo very fit that you harrow not this ſort of ground too ſmall, but that you leave the clods as big as a bowl, the which being mouldred with ſnow and the froſt, will both cover and keep warm what is under-

neath. Moreover, it ſhall be good, that upon ſome fair and dry day, in the beginning of *March*, you put your flock of Sheep into your Wheat, that with their trampling upon it, the Corn may be well, and faſt cloſed with the earth, yea, and preſently after (if it will bear foot) you may roll it as you do Barley, whereby both the Clods ſhall be broken, and the Gratten or ſtubble ſhall be more even and ready for the Mower. Generally you muſt underſtand, that after you have beſtowed your *Marle* in the field, you ought to let it lye unſpread abroad, untill you be ready to plough, and then immediately after the ſpreading of it, turn it into the ground with the Plough; for otherwiſe, if it ſhould lye long ſpread in the field, the Sunne will ſpend no ſmall part of the fatneſſe thereof, although I know many deſire it, becauſe it will be the ſmaller being burned with the Sunne; which I like not. And therefore alſo no good Husband will carry and ſpend his dung in the time of Summer, except he do preſently withall plough it into the ground; for although the Mould of the arable Land it ſelfe will take good, if it be turned to the Sunne, which will both dry and faſten it, yet the matter fareth farotherwiſe with the *Marle*, from which if the Sunne ſhall draw and ſuck the fat moiſture that maketh the Land fertile, then becommeth it (as *Columella* ſpeaketh of the worſt ſort of ground) *Solum ſiccum, pariter & denſum & macrum, quod ſive exceatur, ſive ceſſat colono refugiendum eſt.* It becometh (ſaith he) a dry, thick, and lean Clod, which whether it be tilled or laid to reſt, muſt be forſaken of the Husbandman as unprofitable. And now your Hazell mould being thus marled, plowed, ſown, and manured, you may not charge with Wheat above twice, and then it muſt reſt five or ſix years together; all which time it will bear a very good and ſweet Paſture, well ſet with a white Clover, or three leaved graſſe, moſt batning and profitable, both for Sheep and Bullocks.

After thoſe years ended, it will grow to ſome Moſſe, or will peradventure caſt up Broom; and then it is time to break it up, and ſow and handle it as before, for two other Wheat-ſeaſons or crops, leaving it a Wheat-gratten or ſtubble, rather than with an Oat gratten or ſtubble, which bur-

burneth the Land being marled. Being thus interchangeably ſowed and reſted, your Hazell mould will continue good arable and paſture, by the ſpace of thirty years together, whereas if it ſhould be continually ſowed, ſix, or ſeven, or more years together without reſt, it will become utterly unfruitfull, both for Corn and Cattell alſo. Neither will it any thing avail to marle it over again, when it is ſo decayed, becauſe the former marle having his juice exhauſted by continuall Tillage, whereof the Corn ſucketh one part, and the Sunne, Wind, and Weather dry and waſteth the reſt, is but a dead Clod (as I ſaid) that is not capable of new *Marle* to amend it, nor caſteth any profitable graſſe at all. For proof hereof, I my ſelf have ſeen, that the common earth of High-wayes, by treading of Cattell, waſhing of Rain, and the drying of the Sunne and weather, lay ſeparated from the naturall juice, which it had in the pit, and ſpreading it upon the ground, I ſaw that the land was not onely not amended; bnt much the worſe by it. And now for an end of handling this ſort of Hazell ground; if it ſhall appear unto you that five hundred loads of Marle upon the Acre, have clanged, ſtiffened, and too faſt bound your land (as indeed the nature of *Marl* is to bind and to ſtiffen) then take you ſome of theſe waies to help it: either reſt it four or five years, or fodder upon it before you bring it up with ſo many Cattell as you may; or take the uppermoſt part of your Ditches or Fore-lands, or waſt places of your fields which you may mingle with Dung, and which, before you ſow your Wheat, you may lay upon your fallow and ſtir it in with your plough, and by this you ſhall both looſen your *Marle*, and refreſh your ground: ſo that within forty years, the mould of your ground will clean eat up and ſwallow the *Marle* that you lay upon it; and then become hungry, and is capable of Marle again as it was before at the firſt.

And by this alſo you may ſee the very cauſe for which it is good, not to ſow your marled land continually, but to paſture it by turns, and ſo give it reſt; namely, becauſe the continuall plowing doth exhauſt and ſpend the fat of the Marl, leaving the droſſie, dry, and fruitleſs parts thereof, to lye and cover the face of your ground: whereas paſturage, through the dunging

trea-

treading, and foddering of Cattell, doth increaſe a new Mould, which mingling it ſelf with the dead Mould, doth in the end give ſome life and heart unto it. And therefore theſe Farmers and Owners that have been at the coſt to Marle their ground, and will not forbear to till it, but haſtening to raiſe their charge, do thereby utterly ſtrike it with barrenneſſe, are like to *Æſops* man, who having a Hen that layed him every day a golden Egge, and being greedy to have all the gold at once, did therefore kill the Hen, thinking to have found her belly full of gold, and ſo was both defrauded of that he looked for, and loſt alſo what he had before. Hitherto of the nature, ordering and marling of this hazell ground. Generally now for the continuall fallowing and ſtirring thereof, you muſt underſtand, it may neither be fallowed wet, leſt it anſwer more Graſſe than Corn; nor yet ſo dry, that the dead bottom ſwell up, as in great drowth it will, and ſwallow the good Mould that lyeth above: and therefore bind not your ſelfe to any preciſe time of any month, but the opportunity either in *May* or *June*, as you ſhall find the weather to have prepared it for your deſire. In the like temper you ought to ſtir it after a ſhower, after Saint *James* his day, or in the end of *July*, for ſo will it be dry and hard before the time of ſowing: whereas if it be ſtirred later, every ſmall Rain will deſtemper it into Dirt or Mire, by reaſon of the tenderneſſe thereof, and then can you not fitly beſtow your ſeed upon it.

The ordering of the Marle Cope ground.

The Marle Cope ground followeth, which is moſt commonly, (as I ſaid) a ſtiffe, wet, cold Clay, and not ſo fit as the former to be marled for Corn, except in ſome few fleete places thereof, but yet it may ſerve for Paſture or for Oates; ſuch of them as be marled, muſt be fallowed fleete or ſhallow, leſt the marle become drowned in the wet: then being marled, they may in dry Summers, (and not over-moiſt Countries) bear Wheat in ſome mediocrity. Three hundred loads at the moſt of Marle are ſufficient for an acre of this kind, and two buſhels and a halfe of Wheate will ſow the ſame, which muſt be caſt above furrow, fourteen, or twenty dayes before *Michaelmas*. It requireth round, high, and narrow Ridges, and that the

the water furrows be ſtricken ſomewhat deep, the better to conveigh moiſture from the Corn, and that it be left cloddy as much as may be: and yet to ſay the truth, ſuch as will convert this ſort of ground to Tillage, muſt provide a greater quantity of rich ground or Greet (as we term it) and Dung, than of Marl it ſelf, to amend this Land withall. But if there be any ground that is light and whining, or weeping, becauſe of Springs that are therein, and therewith doth caſt up Ruſhes, Ruſhes. let that be marled upon the green Land with four hundred or five hundred loads upon the acre, about the latter end of Summer; for ſo wil the Marl ſink into it, and caſt up a ſweet graſſe for eight or ten yeares together, and until that the Marle be ſunk ſo low, that another ſward or cruſt of earth be grown over it, and then it is fit time to plow it, but yet very fleete and narrow, for ſo will it bear good Oats; but if it be ſo wet that you cannot adventure to ſow your Wheat upon it, becauſe the Ruſhes be not killed with this firſt plowing, then may you ſow it againe with Oates, drawing good water-furrowes to drain it, becauſe it will be the wetter for plowing, and thereby the Marl alſo will the ſooner loſe his force, thus doing, let it lye to paſture again.

There be ſome other grounds of the Marle Cope, which carry a ſoure Graſſe, and the Dyers-weed, (commonly called Greening weed) and having a great tore thereof, the which alſo may be amended by three hundred or four hundred load of *Marle* upon the acre of the geeen land: for the *Marle* wil both rot the tore or veſture thereof, and alſo inrich the Mould very much; ſo as it will anſwer good paſture twelve years after: and when you ſhall perceive that the *Marl* is well ſunk, then may it be Ploughed fleet and narrow, ſowed with Oats and fallowed, ſo may it both bear good Wheat, if it find a good ſeaſon, and be the richer a long time after partly by the benefit of the *Marl*, partly by the rotting of the tore and ſward, and partly by the dung and water of the Cattell that paſture upon it: for the ſweeter the Paſture is, the more beaſts it feedeth, and the more beaſts it beareth, the more it ſelfe is amended by it. Dyers-weeds.

Touching the fallowing of this ground, great heed is required: for as it ſwelleth more then the Hazel-ground, if it be taken hard and dry, ſo it is more graſſie then that, or the Sandy Soyl if you fallow it wet: The ſeaſon therefore followeth commonly in *April*, or in the beginning of *May*, for to fallow it, and to ſtir it about *Midſummer*, or ſo ſoon after as the rain ſhall have prepared it meet for your unſhod Oxen to labour upon it. Many men fearing to hit the right ſeaſon for this ground in the Spring of the year, do make it ready by a winter fallow before *Chriſtmas*, and by ſtirring it before *Midſummer*, if they may; which manner is not to be miſliked.

The ordering of the ſandy moulds.

Laſtly, commeth the two ſorts of Sandy-ground, and gravelly mould, the one being to be ordered much after the hazel mould, ſaving he would have ſomewhat more Marle, and alſo would be favoured more in the often tillage, than it: for the haſell mould will bear or endure more than the Sand. But this laſt ſort of ſandy-ground, being a very ſtaring ſand (as wee uſe to call it) for much of it will bear Heath, being of it ſelfe very barren and very fleet or ſhallow mould, and over-hot and dry, and by reaſon of that extremity, is unfertil except it be marled very plentifully. And therefore when yon breake up this ground, Plough it as deep as you may, not fearing to caſt down the beſt Mould thereof, becauſe the Marle wil pierce thorow, and ſink down into it. An acre of this ground requireth five hundred or ſix hundred loads of your *Marle* at the leaſt. So alwaies under furrow about *Michaelmas* with two buſhels and a halfe upon the acre, which it wil better carry than the Hazel ground: for although the ſtraw be ſmal, yet will it be harder, and ſtand better than that of the other. The worm whereof I ſpake, will be buſie with that, that groweth on this ſort of ground, until that the heat thereof be ſomewhat aſſwaged by the *Marle*. If your ground be hilly, make your Water furrows in ſuch ſort, as I have ſaid before, for the ſaving both of your *Marl* and Mould, harrow it very little, leave it as cloddie as you may. After that you have taken a Crop from it, fallow that Wheat Gratten or Stubble in *May*; after that ſtir it alſo, and then about *Michaelmas* ſow it with Wheat again: for it

it is not yet rich enough to bear you good Peaſe. This done let it reſt four or five yeares, and if it ſend up any plenty of broom cut or pul them when they be of ſome mean bigneſſe, but plough not the ground until it have taken ſuch reſt; and after it, you may well break it up of new, and ſow it with Oates: which Oats-gratten or Stubble, you muſt ſummer-fallow, when it is at the Harveſt: and then if you deſire to have it in good heart, you muſt Marle it with three hundred or four hundred loads upon the Acre again. After this Crop thus taken, reſt it five or ſix yeares, and then take one Crop more of Oats from it, and after a Summer-fallow, ſow it with Wheat, and ſuffer it to lye a Wheat Gratten or Stubble; till it ſhall have reſted as before is appointed for the hazel ground; and ſo it will be the better thirty or forty years after the marling. We have in this Weald a ſandy and gravelly ground that is wet and weeping, the which is ſcarcely worth the marling, except the nearneſſe of the *Marl*, and thereby the ſmall coſt and charge thereof, may intice a man to beſtow the coſt upon it with *Marle*, and then the beſt way is to Marl upon the green Land, or upon a fallow, with 500. loads or more upon the Acre, or rather to take the profit thereof by Paſture then by Tillage: for it will hardly bear good Corn, which is ſoon killed with wet vapour that is continually ſent up from the wet ſprings that lye under it. This ſort of wet ground is to be fallowed, when it is both hard and dry, becauſe it ſwelleth not as doth the hazel Mould, and may therefore be taken in *June*, if former fair weather bring it not to a dry ſeaſon; and it is to be ſtirred alſo after a ſhowre, in the like plight as the hazel mould before. Your marleable grounds being ordered in this wiſe, ſeverally ſet down for each kind of them, will continually ſtand fruitfull either for Corn or paſture, and albeit the high prices which Corn hath of late years carried, may allure ſome men to ſow Corn inceſſantly and thereby to ſpend their *Marle*, and to choak their arable in the end; yet I doubt not but the wiſer ſort can ſee that it is much better to maintain their grounds hearty and in good plight for ever, then to raiſe a ſhort gaine, that will bring a loug and perpetual loſſe upon them: the rather alſo, becauſe that Butter,

Cheeſe, and the fleſh of beef and mutton be advanced in price equally, if not beyond Wheat, Rye, Barley, and the other grains. Howbeit, a good Husband will make his profit of them both: for if he have one hundred, or one hundred and twenty acres of this Wealdiſh arable, he will ſo *Marle* and manure them, that dividing his land into five or ſix equal parts, he may continually plough twenty, or five and twenty acres for corn, and yet lay to paſture the reſt by turns, ſo that by the help of his *Marle* his land ſhall be continually rich and profitable, both in the one and other of them. And thus I have ſpoken of the Weald, deſcribing the nature and property thereof: ſo may every man of diſcretion and judgment, which ſhall meet with earth of the ſame quality and condition (in what part of this Kingdome ſoever) make application of theſe Rules before rehearſed, and no doubt but the profit will make both the labour and coſt profitable and pleaſant.

THE

The ſeveral wayes, according to the opinion of Writers, and the certain wayes, according to the experience of Huſbandmen, for the deſtruction of Moales, *or* Moales *which digge and root up the earth, and how to reduce and bring the ground to the firſt goodneſſe, having been ſpoyled by them.*

IT is needleſſe either to deſcribe the nature and quality of this Vermine, or the injury and hurt which they do to the Husbandmen, Gardiner, and Planter, ſince no Country is exempt from their annoyance: but touching the remedies, they are of greater ſecreſie, and therefore I thought good in this place to inſert them.

The antient Writers are of divers opinions, touching the manner of deſtroying this creature, and therefore have left unto us ſundry medicines how to work the ſame: amongſt the which one writeth as an approved experiment, that if you take Walnut ſhels, and fill them with brimſtone, chaff, and Petroſin and then ſetting them on fire, put them into holes or trenches, through which the Moal paſſeth, the very ſmel or ſtink thereof wil poyſon them; ſo that if you digge, you ſhal find them dead in their holes.

Another affirmeth, that if you take brimſtone, and rank ſtinking litter of horſes, and burn it in the holes or haunts of the Moals, it alſo will impoyſon them, ſo as you ſhall find they will come out of their Caves, and lye dead upon the green graſs.

A third affirmes, That if you take green Leeks, Garlick, or Onions, and chopping them groſſely, thruſt it into the holes, the very ſume or ſavour thereof will ſo aſtoniſh and amaze the Moales, that they will preſently forſake the earth and falling into a trance, you may take them up with your hands. Now there is not any of theſe medicines which can

be diſ-allowed ; for there is no doubt but that they will work the effects ſpoken of, if the Moal can bee brought to take a full ſent thereof ; but it is a Vermine curious of ſent, and paſſing quick of hearing, and being in a ſpacious ground, will prevent theſe baites : and therefore they are rather to be applied for Gardens or little grounds, where there is but a Moal or two, then in large fields, where there be many hundreds.

To conclude for this matter of medicines, or for the helping of Gardens, Hop-yards, or any ſmal ſpot of ground, there is not any thing held more available, than to ſow in that place the hearb called *Palma Chriſti* ; for it is found by certain experience, that whereſoever that hearb groweth naturally of it ſelfe, or otherwiſe is either purpoſely ſown or planted, therein no wife will any Moal abide.

Thus much I thought good to ſhew you for the uſe of medicine, and for clearing of ſmall grounds : now for the annoyances which happen to great, large, and ſpacious fields, through the multitude of Moals, there is only three abſolute wayes for the curing of the ſame.

The firſt is, in the months of *March* and *April*, to view where they caſt, and go about to make an extraordinary great hill, in which they build them neſts, which is known by the newneſſe of the Mould ; then look for the new trench which leadeth to the ſame ; for as ſhe goeth ſhe returneth : then with your Moal-ſpade open the trench in divers places, and then very ſtil and ſilently, and obſerving to take the wind, to prevent both hearing and ſmelling, watch the Moale as ſhe goeth or returneth, which is, Morning Noon, and Evening, and as ſoon as you ſee her caſt, ſtrike her with your Moale-ſpeare, made of many ſharpe pikes, and ſo caſt her up, and kill her. Thus have I ſeene by one man an hundred deſtroyed in one day.

The next infallible way for the deſtruction of Moales is, If you can by any poſſible meanes bring in water to over-flow and waſh your ground, and as ſoon as the earth is wet over, the Moales will come forth of themſelves, and you may gather

ther them up with your hands at pleaſure.

The laſt (indeed as much approved as any) is to take a live Moale in the month of *March*, which is their bucking or ingendring time, and put it into a deep braſs Baſon, or other deep ſmooth Veſſel, out of which the Moal cannot creep, and then at evening bury it in the earth up to the brimme, and ſo leave it, and the impriſoned Moal will preſently begin to ſhrike, complain, or call, ſo that all the Moals in the ground will come to it, and tumbling into the Veſſel, they are priſoners alſo, and the more priſoners, the greater will be the noiſe: and the more noiſe, the more Moales will come to the reſcue; ſo that I have ſeen 50. or 60. taken in one night, and in one veſſel or braſs Kettle.

Now having thus learned how to deſtroy the Moales, it is meet you alſo know how to prevent the comming in of forraign Moales; becauſe though you keep your ground never ſo clean, yet if your next neighbour be an ill husband, his field may ſoon impoyſon yours again: therefore to prevent the comming in of any forreign Moale, make but little furrowes or Trenches about your ground, and ſcatter in them ſmall round balls made of Hemp-ſeed, or Hemp-ſeed and *Palmi Chriſti* beaten together, and you ſhall not need to fear the comming in of any Neighbouring Moales, how many ſoever there bee about you.

Laſtly, for the reducing or bringing the ground to the firſt perfection again (for howſoever ſome Husbandmen ſay, Moe Moal-hils, moe ground; yet 'tis certaine, that moe Moale-hils, leſſe good ground) for never was yet ſweet graſs ſeene on a Moale hill; therefore to bring it to perfection, which I mean to be meadow ground, or ground to be mown, which Moal-hils cannot be, you ſhall firſt with a ſharp paring ſhovel, pare off the ſwarth about three fingers deep, for fear of hurting the roots of the graſſe: and then the ſwarth taken off, digge away the reſt of the Mould, and ſcatter it as ſmall as you can round about the hill, then take the green ſwarth, and cutting it artificially, lay it cloſe and faſt, and levell, where you took away the Mould, as if there had never been Hill there: and thus do to all your hills, though they be never

ſo

ſo inumerable ; and after all your ground is levelled, as ſoon as the firſt ſhoure falleth, runne all your ground over with a pair of back Harrows, or an Harrow made of a Thorn-buſh and it will break the mould as ſmall as aſhes, which will ſo comfort and refreſh the root of the graſs, that it will grow in infinite abundance ; and ſowreneſſe which was cauſed by reaſon of the Hills, will come again to a perfect ſweetneſſe, and the meadow will be more fruitfull then before by many degrees. And thus much for the deſtruction of Moals, and the reducing of the earth to his firſt goodneſs.

FINIS.

Markham's Farewell to

HUSBANDRY:

OR,

THE ENRICHING OF ALL Sorts of Barren and Sterile Grounds in our Nation, to be as fruitfull in all manner of Grain, Pulse and Grasse, as the best grounds whatsoever.

Together with the annoyances, and preservation of all Grain and Seed, from one year to many years.

As also, a husbandly computation of Men and Cattel's daily Labours, their expences, Charges, and utmost profits.

Now newly the Seventh time, revis'd, corrected & amended, together with many new Additions, and cheap experiments:

For the bettering of Arable Pasture, and Woody Grounds: Of making good all Grounds again, spoyled with over-flowing of salt water by Sea breaches; as also, the enriching of the Hop-garden. And many other things never published before.

By *G. M.*

LONDON,

Printed by *W. Wilson*, for *George Sawbridge*, at the Bible on Ludgate-hill, neer Fleet-bridge, 1660.

TO THE RIGHT WORSHIPFULL and his moſt worthy Friend Mr. *Bonham Norton* Eſq;

Worthy Sir,

KNowledge, which is the divine mother of certain Goodneſſe, never came unwelcome to a knowing Judgement; no more I hope, ſhall this my labour to your worthy Self, ſince doubtleſſe you ſhall find in it many things New, ſome things neceſſary, and nothing which hath not in it ſome particular touch of profit: It is a work your former incouragements to my other labours did create in me, and the wants you worthily found, I hope ſhall bring you ſupplies both wholeſome and becomming. The experience, I

assure your goodneſſe, was the expence of a bitter and tedious Winter; but the contentment (in gaining my wiſh) made it more pleaſant then all the three other Seaſons. What ever it be, it comes to you full of love, full of ſervice. And ſince I know vertue meaſureth all things by its own goodneſs; it is enough to me, that I know you are that Vertue. In you is power to judge, in you is Authority to exerciſe Mercy; let them both flye from your goodneſſe with that mildneſſe, that in them my hopes may be crowned, and my ſelf reſt ever at your ſervice.

GERVACE MARKHAM.

The

The Preface to the *Reader*.

Shewing the uſe, profit, and truth of the Work.

THe uſe and application of this Work, (gentle Reader) is to reduce the Hard, Barren, and Sterile grounds, ſuch as were never fruitfull, or ſuch as have been fruitfull, and are made barren by ill Huſbandry, to be generally as fruitfull as any ground whatſoever: from whence ſhall enſue theſe generall profits.

Firſt, Plenty of Corn and Pulſe; becauſe all grounds being made able and apt for Tillage, the Kingdome may afford to ſow for one buſhell that is now, hereafter five hundred, ſo mighty great are the unfruitfull waſts of Heathes, Downes, Mores, and ſuch like, which at this day lye unprofitably; and to this abundance of Corn will ariſe an equall abundance of Graſſe and Paſture: for as the beſt ground of the worſt is to be converted to Paſture, and the worſt to Tillage; ſo that worſt being tilled and dreſt, when it hath done bearing of Corn, (which will be in ſix or ſeven years) ſhall for as many years more bear as good Paſture either for breeding or feeding as can be required, and then being newly dreſt again, ſhall newly flouriſh in its firſt profit.

Secondly, Whereas in fruitfull places, the third or fourth part of all arable ground, is loſt in the fallow or tilth ground, now in theſe barren grounds, you ſhall keep no fallow field at all, but all ſhall bear either Corn or Graſſe; that fallow part ſerving

ſerving to pay for the charge beſtowed on it, and the reſt.

Laſtly, whereas in fertile grounds you cannot have either Wheat, Barley, or Rye, under two, three, four, five, and ſometimes ſix ſeverall plowings, as fallowing in January *and* February, *Stirring in* April *and* May, *Soiling in* July *and* Auguſt, *Winter-ridging in* October *and* November, *and Sowing, with other Arators; now in theſe hard grounds reſtored, you ſhall not plow above twice at the moſt, to the ſaving of the Huſbandmans pains, his Cattels travell, and a larger limitation of time for other neceſſary buſineſſes.*

For the truth of the Work, he that will ride into the barren parts of Devonſhire *or* Cornwall, *into the Mountainous parts of* Wales, *into the hard parts of* Middleſex, *or* Darbyſhire, *or into the cold parts of* Northumberland, Cumberland, Weſtmerland, Lancaſhire, *or* Cheſhire; *ſhall find, where induſtry is uſed, a full ſatisfaction for all that is here written.*

Farewell.

Thine, G. M.

MARKHAM HIS Farewell to Husbandry.

CHAP. I.

The Nature of Grounds in generall; But particularly of the barren and sterill earth.

TO come to the full effect of my purpose without any preambulation, or latisfaction to the curious, (for to the honestly vertuous are all mine endeavours directed) you shall understand that it is meet, that every Husbandman be skilfull in the true knowledge of the natures of grounds; as, which is fruitfull, which not: of which in my first Books I have written sufficiently; nor do I in this book intend to write any tittle that is in them contained; for as I love not *Tautology*, so I deadly hate to wrong my friend.

Grounds, then, as I have formerly written in my first books, being simple or compounded; as simple Clayes, Sands, or Gravels together, may be all good, and all fit to bring forth increase; or all evill and barren, and unfit for profit: for every Earth, whether it be simple or compound, whether of it self or of double mixture, doth participate wholly with the Clyme wherein it lyeth; and as that is more hot, or more cold, more moyst or more dry, so is the earth evermore or lesse fruitfull. Yet for the better understanding of the plaine Coun-

ſerving to pay for the charge beſtowed on it, and the reſt.

Laſtly, whereas in fertile grounds you cannot have either Wheat, Barley, or Rye, under two, three, four, five, and ſometimes ſix ſeverall plowings, as fallowing in January *and* February, *Stirring in* April *and* May, *Soiling in* July *and* Auguſt, *Winter-ridging in* October *and* November, *and Sowing, with other Arators; now in theſe hard grounds reſtored, you ſhall not plow above twice at the moſt, to the ſaving of the Huſbandmans pains, his Cattels travell, and a larger limitation of time for other neceſſary buſineſſes.*

For the truth of the Work, he that will ride into the barren parts of Devonſhire *or* Cornwall, *into the Mountainous parts of* Wales, *into the hard parts of* Middleſex, *or* Darbyſhire, *or into the cold parts of* Northumberland, Cumberland, Weſtmerland, Lancaſhire, *or* Cheſhire; *ſhall find, where induſtry is uſed, a full ſatisfaction for all that is here written.*

Farewell.

Thine, G. M.

MARKHAM HIS Farewell to Husbandry.

CHAP. I.

The Nature of Grounds in generall; But particularly of the barren and sterill earth.

TO come to the full effect of my purpose without any preambulation, or latisfaction to the curious, (for to the honestly vertuous are all mine endeavours directed) you shall understand that it is meet, that every Husbandman be skilfull in the true knowledge of the natures of grounds; as, which is fruitfull, which not: of which in my first Books I have written sufficiently; nor do I in this book intend to write any tittle that is in them contained; for as I love not *Tautology*, so I deadly hate to wrong my friend.

Grounds, then, as I have formerly written in my first books, being simple or compounded; as simple Clayes, Sands, or Gravels together, may be all good, and all fit to bring forth increase; or all evill and barren, and unfit for profit: for every Earth, whether it be simple or compound, whether of it self or of double mixture, doth participate wholly with the Clyme wherein it lyeth; and as that is more hot, or more cold, more moyst or more dry, so is the earth evermore or lesse fruitfull. Yet for the better understanding of the plaine Coun-

Country man, you ſhall know that both the fruitfull and unfruitfull Grounds have their ſeverall faſhes and characters whereby they be as well known, as by the clime or ſituation of the continent; for that ground, which, though it bear not any extraordinary abundance of graſs, yet will load it ſelf with ſtrong and luſty weeds, as Hemlocks, Docks, Mallowes, Nettles, Ketlock, and ſuch like, is undoubtedly a moſt rich and fruitfull ground for any grain whatſoever. Alſo, that ground which beareth Reeds, Ruſhes, Clover, Daiſie, and ſuch like is ever fruitfull in graſs and Herbage, ſo that ſmall coſt, and leſſe labour in ſuch grounds, will ever make good the profit of the Husbandman: But with theſe rich grounds, at this time I have nothing to doe.

To come down then to the barren and unwholeſome Grounds, you ſhall underſtand that they are to be known three ſeverall wayes: firſt, by the Clime and Continent wherein they lye; next, by their conſtitution and condition; and laſtly, by outward faces and characters. By the Clime and continent, as when the ground lyes farre remote from the Sunne, or when it lyes mountainous and high, ſtony and rocky; or ſo neer unto the skirts and borders of the Sea, that the continuall Fogges, Storms, Miſts, and ill Vapours ariſing from thence do poyſon and ſtarve the earth: all which are moſt apparent ſignes of barrenneſs. By the Conſtitution and Condition, as when the ground is either too extreamly cold and moyſt, or elſe too violently hot and dry; either of which produceth much hardneſſe to bring forth, and ſheweth the earth, ſo lying to be good for little or no profit. By the outward faces and Characters, as when you ſee (inſtead of Graſs, which would be green, flowry, and thick growing) a pale thin moſſie ſubſtance cover the earth, as moſt commonly is upon all high Plains, Heaths, Downs, and ſuch like: or when you ſee the ground covered with Heath, Ling, Broom, Braken, Gorſe, or ſuch like; they be moſt apparent ſignes of infinite great barrenneſſe, as may be ſeen in many Mores, Forreſts, and other wild and woody places. And of theſe unfertile places, you ſhall underſtand that it is the clay ground, which for the moſt part brings forth the Moſſe, the Broom, the Gorſe, and ſuch like: the Sand, which bringeth forth Brakes, Ling, Heath;

and

and the mixt earth, which utters Whinnes, bryars, and a world of ſuch like unnatural and baſtardly Iſſues.

Thus having a true knowledge of the Nature and Condition of your ground, you ſhal then proceed to the ordering, caring, and dreſſing of the ſame, whereby it may not only be purged and clenſed from thoſe faults which hindred the increaſe thereof, but alſo ſo much bettered and refined, that the beſt ground may not boaſt of more ample increaſe, nor your more fruitfull placed Neighbours exceed you in any thing, more then in a little eaſe.

CHAP. II.

Of the Ordering, Tilling, and Dreſſing of all ſorts of plain barren Clayes, whether they be ſimple or compound.

THou whom it hath pleaſed God to place upon a barren and hard ſoyl, whoſe bread muſt evermore be ground with ſweat and labour, that maiſt nobly and victoriouſly boaſt the conqueſt of the earth, having conquered Nature by altering Nature, and yet made nature better than ſhe was before: thou I ſay that taketh this honeſt delight in goodneſſe, hearken unto theſe following Precepts.

The firſt enriching of barren Grounds.

As ſoon as thou haſt well pondered and conſidered the nature of thy ground, and doſt find that it is altogether barren & unfruitful, the clyme and condition not ſuffering it to bring forth any thing of worth or profit, and that thou haſt well weighed what manner of earth it is, and that namely it is either a ſimple Clay, or a Clay ſo mixt with other earths, that yet notwithſtanding the Clay is ſtil moſt predominant; thou ſhalt then ſelect or chuſe out of this earth ſo much as to thy ſelf ſhal ſeem convenient, it being anſwerable to the ſtrength of thy Teame, and the ability of thy purſe and labour to compaſſe; and this earth ſo choſen out, thou ſhal about the beginning of *May*, in a fair ſeaſon break up with a ſtrong Plough, ſuch as is generally uſed in all ſtrong Clay grounds, the Share being rather long then broad, and the Coulter rather ſomewhat bending then ſtreight and even, according as the nature of the ground ſhall require,

which every ſimple Plough-man will ſoon find out in turning up two or three furrowes ; for according to the cutting of the earth, ſo muſt the Husbandman faſhion the temper of his Plough.

The manner of Ploughing.

Now for the manner of plowing this bad and barren earth, if the ground lye free from water (which commonly all evill barren earths do) you ſhall then throw down your Furrows flat, and betwixt every Furrow you ſhall leave a baulke of earth half as broad as the Furrow, and ſo go over, and plow your whole earth up, without making any difference or diſtinction of lands : bnt if you fear any annoyance of Water, then you ſhall lay your Furrows more high, near, and cloſe together, dividing the grounds into ſeverall lands, and proportioning every land to lye the higheſt in the midſt, ſo that the water may have a deſcent or paſſage on either ſide.

Hacking of Ground.

Now ſo ſoon as you have thus plowed up your land, and turned all the ſwarth inward unto the earth, you ſhall then take Hacks of iron, well ſteeled and reaſonable ſharp, ſuch a competent number, as your purſe or power can compaſs, or the greatneſs of your ground requireth : for you ſhall underſtand that one good hacker, being a lufty labourer, will at good eaſe hack or cut more than half an acre of ground in a day ; and with theſe hacks you ſhall hew and cut to pieces all the earth formerly plowed up furrow by furrow ; and not the furrows onely, but alſo each ſeveral baulke that was left between, and any other green ſwarth whatſoever the plough had eſcaped, and it ſhall be cut into as ſmal peeces as conveniently as you can ; for thereby is your mould made much more mellow and plentifull, and your Seed at ſuch time as it is to be caſt into the earth, a great deale the better and ſafer covered, and much more ſooner made to ſprout and bring forth increaſe. Now for the ſhape and faſhion of theſe Hacks, you ſhall behold it in this figure.

When



When you have thus hacked all your ground, and broke in peeces all hard cruſts and roughneſſe of the ſwarth, you ſhall then immediately, with all the convenient ſpeed you can (becauſe time is very precious in theſe labours) if you be neer unto any part of the Sea-coaſt, or to any other creek or River, where the ſalt-water hath a continnal recourſe, thence fetch (either on horſe-back, or in Cart, or other Tumbril, ſuch as the nature of the Country, or your own eaſe can afford) great ſtore of the ſalt ſand, and with it cover your ground which hath beene formerly plowed and hackt, allowing unto every acre of ground, three-ſcore or fourſcore full buſhels of ſand, which is a very good and competent proportion; and this ſand thus laid, ſhall be very well ſpread and mixed among the other hackt and broken earth. And herein is to be noted, that not any other ſand but the ſalt is good or available for this purpoſe, becauſe it is the brine and ſalmeſſe of the ſame which breedeth this fertility and fruitfulneſſe in the earth, choaking the growth of all weeds and bad things which would ſprout from the earth, and giving ſtrength, vigour, and comfort to all kind of grain or pulſe or any fruit of better nature. Sanding of Ground.

When you have thus ſanded your earth, you ſhall then if you have any Limeſtones about your grounds (as barren earths are ſeldome without) or if you have any quarries of ſtone (which are ſeldome unaccompanied with Lime-ſtone) gather ſuch Lime-ſtone together, and make a Kiln in the moſt convenient place you have, as well for the carriage of the Lime, as for the gathering together of the ſtone, and having burnt your Lime, the manner whereof is ſo generally well known through the whole Kingdome, that in this place it needeth little or no repetition, you ſhall then on every Acre ſo formerly plowed, hackt, and ſanded, beſtow at leaſt forty or elſe fifty buſhels of lime, ſpreading and Liming of Ground.

mixing it exceedingly wel with the other ſand and earth ; and herein is to be noted, that the ſtronger and ſharper the Lime is, the better the earth wil be made thereby, and the greater encreaſe and profit will iſſue from the ſame : neither ſhal you need to reſpect the colour and complexion of the Lime, as whether it be purely white (as that which is made from Chalke) or gray (as that which is made from the ſmal Lime-ſtone) or elſe blackiſh brown (as that which is made from the great ſtone and main Quarry) ſince it is the ſtrength and goodneſſe of the Lime, not the beauty and colour, which brings forth the profits.

Manuring of Ground.

Now that this Lime is of excellent uſe, and wonderful profit, do but behold almoſt all the Countries of the Kingdome where there is any barrenneſſe, and you ſhal find and ſee how frequently Lime is uſed, in ſo much that of mine own knowledge in ſome Countries where (in times paſt) there was one Buſhel made or uſed, there is now many loads, and all riſen from the profitable experience which men have found in the ſame.

Now, when you have thus Limed your ground, you ſhal then take of the beſt manure you have, as Oxe, Cow, or Horſe-dung, Straw rotted either by the littering of beaſts or by caſting upon high-wayes, the mud of Lakes, Ponds or Ditches ; the ſoyle of young Cattel made in the Winter time by feeding at ſtand, Heaks, or any ſuch like kind of Ordure ; and this manure or compoſt you ſhall carry forth either on Horſe back, or in Cartes or Tumbrels (according as the Country wil afford) and you ſhal lay it and ſpread it upon your ground ſo formerly plowed, Hackt, Sanded, and Limed in very plentiful manner, ſo far forth as your proviſion wil extend for it is to be underſtood, that barren and hard earths can never be overladed with good manure or compoſt, ſince it is onely the want of warmth and fatneſſe, which manure breedeth and cauſeth all manner of fruitfulneſſe.

Times for all labours.

After you have thus manured all your grownd, it is to be ſuppoſed that the ſeaſon of the year wil be ſhot on, for the labour of ſandirg wil take little leſſe than two months, your ground being of an indifferent great quantity, except you have aſſiſtance and help of many of your friends, which is a courteſie

that

that every Husbandman may embrace, but not truſt unto ; for I wonld not wiſh any man that hath not Tenants to command, to preſume on other friends, leſt they fail him, and ſo his work lye halfe done, and halfe undone, which is a great Character of negligence and improvidence : but let every one proportion their labours according to their own ſtrengths, and the number of their ordinary families. The Liming of your ground wil take at leaſt half ſo much time as the ſanding, and the Manuring rather more than leſſe than the Liming; ſo that by any reaſonable computation of time, beginning to plow yonr ground at the beginning of *May*, ere it be Hackt, Sanded, Limed, and Manured, *Michaelmas* wil be come, which is the end of *September*, for I allow the month of *May* to plowing and hacking; *June* and *July* for Sanding; *Auguſt* for Liming; and *September* for Manuring. So then to proceed on with our labour, at *Michaelmas*, or from that time to the end of *October*, you ſhal begin to plow over that ground againe which formerly you had Plowed, Hackt, Sanded, Limed and Manured ; and at this latter plowing you ſhal plow the ground ſomewhat deeper then you did before ; and taking a good ſtitch (as they call it in Husbandry) you ſhall be ſure to raiſe up the quick earth, which had not been ſtirred up with the Plough before, making your furrowes greater and deeper than formerly they were, and laying them cloſer and rounder together then they were before ; and in this order or latter earing, you ſhal be careful to Plough your ground as clean as you can without baulks or other eſcapes in Husbandry, and as you thus plow your ground, you ſhal have certain Hackers, with their Hacks, to follow the Plough, and to cut the earth and furrows into very ſmal peeces, as was formerly ſhewed in the hacking and cutting of the firſt arder ; then ſo ſoon as your ground is thus ploughed and hackt; you ſhal take a paire or two of very ſtrong and good iron harrows, and with them you ſhal go over your ground, tearing that which was formerly ploughed and hackt into more ſmal peeces than before, and raiſing up the mould in much greater abundance than was formerly ſeen : which work once finiſhed, you ſhal then take your Seed which would be the fineſt, cleaneſt, and beſt Wheat you can provide, and after the manner of good Husbandry

Second Plowing.

Second hacking.

First Harrowing.

Of ſowing the ſeed.

bandry, you ſhal ſow it on the ground very plentifully, not ſtarving the ground for want of Seed (which were a tyrannous penury) nor yet choaking it with too much (which is as laviſh a foolery) but giving it the full due, leave it to the earth and Gods bleſſing.

The ſecond Harrowing.

Now ſo ſoon as you have thus ſown your ſeed, forthwith you ſhall take all the harrows again, harrowing the ſeed into the earth, and covering it cloſe and well with all care and diligence; and in this latter harrowing, you ſhall have great reſpect to break every clot as much as you can, and ſo ſtirre up and make as much mould as you can, and the finer ſuch mould is made, the better it is, ſo it cover deep and cloſe; for you ſhall underſtand, that all theſe kinds of barren Clayes are naturally tough, cold, and binding, whereby they ſtifle and choak any thing that growes within them; for the naturall toughneſſe of the earth will not give any thing leave to ſprout, or if it do ſprout, the binding nature thereof ſo fetters and locks it within the mould, that it cannot iſſue out; or if it do (with extreme ſtrugling) riſe through the pores of the ſame, yet doth the cold preſently ſtarve the root and make the ſtemme utterly unable to bring forth fruit, or any profit at all, ſo that if the toughneſſe be not converted to a gentle looſeneſſe, and eaſie dividing of it ſelf, the coldneſſe unto warmth, and the hard binding unto a ſoft liberty, there can be ſmall hope of commodity, which this manner of dreſſing the earth bringeth to paſs; for the mixture of the ſand takes away the toughneſſe, the Lime brings heat, and the manure comfort and liberty: as for the hacking and cutting the earth, that is to make all the reſt ſymbolize and mixe together: for as if any by a Diſpenſatory make a Medicine, and caſt his ingredients confuſedly one upon another, without care of mixture; melting or diſſolution, ſhall find but a corrupt, diſorderly, and ill compounded receit; ſo he that dreſſeth and manureth his ground, and doth not by hacking, plowing, or ſome other husbandly courſe mixe the earth and the compoſt perfectly well together, ſhall ſeldom find profit from his ſeed or find any man of wit deſirous to become his imitator. Now I muſt confeſſe, that ſome eaſie grounds of light and temperate nature, will mixe very well and ſufficiently by the help of the Plough only

Faults in the Earth.

only ; but this barren hard earth of which I now write, muſt onely be broken by this violent and extream labour, or elſe there will neither be mould, earth, or any converture for the Seed, but only foul, great and diſorderly clots and lumps, through which the grain can never paſs, and that which lyeth uncovered will be made a prey to fowl and other vermine which will hourly deſtroy it.

After you have ſown and harrowed the ground, you ſhall then ſee if there remain any clots or hard lumps of earth unbroken, which the teeth of the harrow are not able to tear in peeces (as it is very likely you ſhall perceive many) for theſe hard barren earths which are plowed up in their green ſwarths, are nothing neer ſo eaſily broken and brought to mould, as are the mellow ſoft earths which have been formerly plowed many times before, becauſe the hard and intricate roots of the Graſſe, Moſs, and other quick ſubſtances growing upon the ſame doth bind and hold the mould ſo cloſe and faſt together, beſides the natural ſtrength and hardneſſe of the earth, that without much induſtry and painfull labour, it is impoſſible to bring it to that fineneſſe of mould which Art and good Husbandry requireth ; therefore as ſoon as you behold thoſe clots and lumps to lye undiſſevered and unbroken, you ſhall forthwith take good ſtrong clotting beetl s, or mauls made of hard and very ſound wood according to the proportion of this figure. Of clotting the Earth.

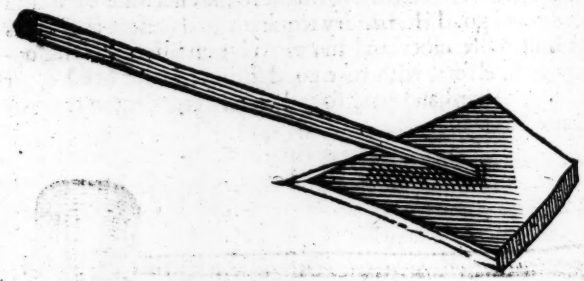


And with theſe maules or clotting beetles, you ſhall break all the hard clots and lumps of earth in pieces, even to ſo ſmall duſt as poſſibly you can, becauſe you are to preſuppoſe that theſe clots thus hard, tough, and unwilling to be with any means digeſted into

into mould, are either not at all, or elſe very inſufficiently mixed with the Sand, Lime, and other manures : and therefore you muſt rather break them that thereby they may mixe, and give eaſie paſſage to the Grain, and not like heavy poyſes and dead lumps lye and preſs down the Seed ſo that it cannot ſprout.

Another manner of Clotting.

But if it ſo fall out, partly by the hardneſſe of the ill earth, partly through the ſeaſon and dryneſſe of the yeer, that theſe clots and lumps of earth will either not be broken at all, or at leaſt ſo inſufficiently that the mould will not be any thing neer ſo fine as you would have it ; you ſhall then, having done your beſt endeavour, let your ground reſt till there have faln a good round ſhower or two of rain : which may wet the clots through and through ; and then the next fair blaſt you ſhall take your clotting beetles, but not thoſe which you took before in the dry ſeaſon, but ſome much lighter, broader and flatter, being made of thick Aſh-boards more than a foot ſquare, and above two inches in thickneſſe according to this figure.



And with theſe flat Maules and Beetles, you ſhall break all the unbroken clots and lumps of earth which ſhall trouble or annoy your ground, making your Lands as plain and ſmooth as is poſſible, ſo that the grain may have eaſie paſſage forth ; which labour as ſoon as you have finiſhed, you ſhall then refer the increaſe and proſperity thereof unto the mercies of God, who no doubt will give his bleſſings according to thy labour and thankfulneſſe.

As

As touching the trimming and weeding of this Corn, after it is ſprung a foot above the earth, or thereabout, you ſhall underſtand, that theſe hard barren grounds are very ſeldom troubled with weeds; for weeds, eſpecial great, ſtrong, and offenſive weeds, are the iſſues of rich and fertile ſoiles; yet, if through the trimming and making of this earth (which is not commonly ſeen) you do perceive any ſtore of thiſtles or other groſſer weeds to ſpring up, you ſhall then in the month of *May*, with hooks, nippers and ſuch like tooles, cut them away or pull them up by the rootes, which indeed is the better manner of weeding. Of weeding.

Now here is to be underſtood, that your ground being thus dreſſed and trimmed as is before ſhewed, you may very well for the two firſt years ſow Wheat or Rye upon it, but Wheat is the greater profit and more certain ſeed; the third year beſtowing but your fold of Sheep upon it, that is, manuring it with your ſheep, (for it is to be intended that in theſe barren earths ſheep are the greateſt ſtock of which the Husbandman can boaſt) you may very well ſow it with Barley, and have a fruitfull & plentifull crop thereon; the next three yeers, you may ſow it with Oates; and the ſeventh year you may ſow it with ſmall white Garden Peaſe or Beanes, according as you ſhall find the ſtrength and goodneſſe of the ground, (for Beanes deſire ſomewhat a richer ſoyle than the Peaſe;) then for three or four years following the ſeven, you may let it lye at reſt for graſs, and doubtleſſe it will yeeld you either as good paſture, or as good Medow as you can reaſonably require. And then after the expence of this time, it ſhall be good that you dreſſe & order your ground again in ſuch ſort as was formerly declared; and thus you may every year dreſs one or other piece of ground, till you have gone over all your ground, or at leaſt as much as you ſhall think expedient; and without faile, he that is Maſter of the moſt fruitfulleſt and richeſt ſoyl, ſhall not boaſt of any greater increaſe then you ſhall, only your charge may be a little more, and ſo ſhall be alſo your commodity, which ſhall make an amends for your charge: as for your toyles, yours ſhall be much the leſſe, by a juſt computation; for though you have many labours; yet they are but Summer labours, and neither hurt your own body, nor your Several Seeds for ſeveral years.

Cattel; whereas the Maſter of the rich ſoyle is in continuall work both Winter and Summer, labouring twice ſo much to confound the ſuperfluous growth of weeds, as you do to beget the increaſe of Corn; and whereas he muſt ever keep a third or fourth part of his Corn ground without fruit, you ſhall not keep any which ſhall not yield you a ſufficient commodity.

Objection. Now methinks I hear in this place to be objected unto me, that whereas I do preſcribe the ſanding of theſe barren earths with the ſalt Sea-ſand and no other, (as it is true, for all other freſh ſand is unvailable) what if the ground do lye ſo farre within the Land, that there is no ſalt ſand within many ſcore miles of it, how then ſhall I make good my barren earth? ſure to fetch ſand ſo farre will never equall the coſt; or it may be this experience hath no further limits then to ſuch hard and barren earths as lye alongſt the Sea coaſt only.

Anſwer. To this I anſwer, that albeit this ſalt Sea-ſand be of infinite good and neceſſary uſe, inriching grounds wonderfully much, yet is not this experience of bettering of barren ſoiles ſo ſtrictly bound thereunto, but that without any uſe of the ſame, you may make your earth as fruitfull in Corn or Graſs, as hath been already formerly declared.

Ordering Earth where ſands wanteth. Therefore if your ground lye much within the Land, and farre from the Sea, ſo that this commodity of ſand is not by any poſſible meanes to be gotten; then you ſhall (having firſt looked into the nature of your ground, and finding it to be by all characters and faces a cold, barren, ſtiff, dry Clay, yeelding nothing but a ſhort moſſie graſs, without any other burthen at all as is ſeen upon moſt Plains, and Downs of this Kingdome) firſt plow it and hack it, as was before ſhewed in the former part of this Chapter, then inſtead of ſanding it, you ſhall lime it as aforeſaid, or rather a little more plentifully, then you ſhall manure it, after (as at ſeed time) you ſhall plow it and hack it again, then harrow it as before ſaid; then to every acre of ground you ſhall take two buſhels of very dry bay-ſalt, and in ſuch manner as you ſow your wheat, you ſhall ſow this ſalt upon the ground; then immediately after the ſowing of the ſalt, you ſhall ſow your Wheat, which wheat would be thus prepared before you ſow it; the day before you are to ſow your grain, you ſhall

Sowing of Salt.

ſh ll take bay ſalt and water, and mixing them together make a brine ſo ſtrong that it will bear an egge, then put the Wheate you are to ſow into that brine, and let it ſteep therein till the next day, then drain it as clean as may be from the brine, and ſo ſow, harrow it, clod it, and weed it, as was before declared, and no doubt but you ſhall find a marveilous great increaſe thereby, for this I can aſſure you, both from a moſt certain knowledge, and a moſt worthy Relation, that a Gentleman buying ſome ſtore of ſeed-wheat, and inforſt to bring it home by Sea, by ſome caſuall meanes, ſome of the ſacks at the unlading, fell into the Sea, and were much drench in the ſalt-water; whereat the Gentleman being grieved (as doubting ſome hurt to come to the ſeed) yet inforſt of neceſſity to make uſe thereof, cauſed all the Wheat which was ſo wet to be ſown by its ſelf in a particular place, and upon the worſt ground which he had, (as much deſpairing in the increaſe thereof) and it is moſt infallibly true, that of that wet ſeed, he received at leaſt five fold more profit then of any other; and from thence it came, that this experiment of Brine & the ſowing of ſalt hath taken place; from which the painfull Husbandman hath found ſuch infinite increaſe to ariſe, that the uſe thereof will never be laid down in this Kingdome. Neither is the thing it ſelfe without good and ſtrong probability of much increaſe and ſtrength for the bettering of all manner of arable grounds; for there is nothing which killeth weeds, quicks, and other offences of the ground ſo much as ſaltneſſe: for what makes your Pidgeons dung & your Pullens dung to be better for arable grounds, than any other dung or manure whatſoever, but by reaſon of the ſaltneſſe thereof? by which ſaltneſſe alſo, you may judge the ſtrength and heat thereof, inſomuch that the proper taſte of fire, or any hot thing is ever ſalt; alſo we ſay in Philoſophy, that bloud which carrieth the vitall heat and warmth of the body is in taſte ſalt, and ſo a nouriſher, maintainer, and increaſer of all the ſtrength and vigour of the inward faculties; whereas Flegme, Choler, and Melancholly, which are the hurts and confounders of the vitall ſpirits, the firſt is in taſte ſweet, the ſecond bitter, and the laſt of an earthly and dry taſte, full of much loathſomeneſſe.

The Excellency of Salt.

Now again you ſhall underſtand, that as you thus wet or ſteep

Of ſteeping ſeed in brine.

ſteep your Wheat ſeed, ſo you may alſo ſteep any other Seed ; as barley, oats, beans, peaſe, lupins, Fetches, and ſuch like ; of which your beans, peaſe, and lupins, you may ſteep more than any of the reſt, and your Oats the leaſt.

As touching Rye, it ſhall be good not to ſteep it at all, for it is a great enemy to all manner of wet and moyſture, inſomuch, that the curious Husbandman will forbear to ſow it in any ſhowre of raine, bearing in his minde this antient adage or ſaying, that *Rye will drownd in the Hopper* ; as on the contrary part, *Wheat would be ſown ſo moiſt, that it might ſtick to the Hopper* : Yet notwithſtanding, when you do ſow Rye in any of theſe In-lands and cold barren Countries, where ſand is not to be gotten, you ſhall not by any means omit the ſowing of your ſalt before ; for it is nothing neer ſo moiſt as it is warm and comfortable.

CHAP. 3.

Of the ordering, Tilling, and dreſſing of all rough Barren Clays, whether ſimple or compound, being laden and over-run with Gorſe, Broom, and ſuch like.

NExt unto theſe plain barren earths, which by reaſon of their heights, are ſubject in the Winter time to all manner of cold, froſts, ſtormes, tempeſt, blaſts, and windes, which are the perfect hinderers of all encreaſe and growth ; and in the Summer time to all hot ſcorchings, ſcaldings, and fiery reflections of the Sunne, which on the contrary part, burneth and withereth away that little ſeeming increaſe which appeareth above the earth ; I will place that barren clay, whether it be mixt or unmixt, which lying not ſo high, and being ſubject unto thoſe hurts and offences, ſeemeth to be a little more fruitfull, yet either by the extream cold moiſture thereof, or the ſtony hardneſſe and other malignant qualities, is no leſſe barren than that of which I have formerly written, which indeed is that barren and vile ſoyle, which will neither bear corn nor graſs, but is only over-run and quite covered over

over with great, thick, and tall buſhes of Gorſe or Furres, which is a moſt ſharp, woody, and groſſe weed, ſo full of pricks, that neither Horſe, Beaſt, Sheep, nor Goats, dare thruſt their noſes, to the ground to gather up that little poor graſs, which groweth thereon. And albeit theſe Gorſe or Furs are one way a little commodity to the needfull Husbandman, in being a reaſonable good fuell, either for baking, brewing, or divers other ſudden and neceſſary uſes; yet in as much as the profit being compared with the great quantity of earth which they cover and deſtroy, and which with good Husbandry might be brought to great fruitfulneſſe, it is indeed no profit at all; it ſhall not be amiſſe for every good Husbandman that is peſter'd and over-laden with ſuch ground, to ſeek by way of good Husbandry how to reduce and bring it to that perfection and excellency which may be beſt for his own particular commodity, and the generall good of the Kingdome wherein he liveth.

Then there is another kind of ſoile which is nothing at all differing from this, but is every way as barren and ſterile, (which is as noyſome a weed as the former) and though it have not ſuch ſharp prickles as the other, whereby to hinder the grazing of Cattel; yet doth it grow ſo cloſe and thick together, and is naturally ſo poiſonous and offenſive to graſſe, that you ſhall ſeldome ſee any grow where this Broom proſpereth; beſides, the bitterneſſe thereof is ſo unpleaſant and diſtaſtfull to all kind of Cattell, that not any will ever crop or bite upon the ſame only it is of ſome neceſſary uſe for the poor Husbandman, in reſpect that it ſerveth him both for fuell, for thatching and the covering of his houſes, (being for that purpoſe, of all, the longeſt laſting) and alſo for the making of Beeſoms for clenſing of the houſe and barnes, or elſe for ſale and commodity in the Market; all which profits (as before I ſaid) being compared with the loſſe of the ground, and the goodneſſe that might be reaped from the ſame, are indeed truly no profits but hinderances.

Therefore I would wiſh every man that is Maſter of ſuch grounds, whether they be over-run with Gorſe, Furres, Broom, or any ſuch kind of groſſe, woody, or ſubſtantial weed, firſt to cut

Destroying of Weeds.

up the weed (of what sort soever it be, whether Gorse, Furs or Broom) as close and neer to the ground as you can possibly, and then making them up in sheafes or bigge faggots, carry them home, and stack them up very drye, so as no rain may enter or pierce into them, for the smalleſt wet will rot and consume them to dirt and filthineſſe ; which done you shall make Labourers with hacks, picks, and such like tools, to stub up all the roots which you left in the ground, even to the very bottome of the same ; and these rootes you shall be very carefull to have stubbed up exceeding clean, by no meanes leaving (so near as you can) any part or parcell of the roots behind you ; then these roots thus stubbed up, you shal diligently gather together into little heaps as bigge as Moal-hills, and place them upon the ground a pretty distance one from another, and so let them lye till the Sun and wind have dryed them : for it is to be intended, that this labour must begin about the latter end of *April*, and beginning of *May*.

Then so soon as you find these rootes are thorowly dryed, you shall pile them handsomely together, laying them a little hollow one from another, and then with a hack cut up some of the same earth, and therewithal cover all the rootes quite over, onely leaving a vent hole at the top, and on one side, and so let the hills rest two or three dayes, till the earth be a little parcht, and dried, then take fire and some other light dry fuel which is apteſt to blaze, and with the same kindle every hill, not leaving them till you see them perfectly on fire ; which done, let them burn both day and night, till the substance being wholly consumed, the fire go out of it own self, and this in some Countries is called the *Burning of Bait*.

Burning of Baite.

Breaking of the burnt earth.

Now as soon as the fire hath been extinguished for two or three dayes, you shal then come, and with shovels (and beetles to break the hard burnt earth in pieces) you shall spread all the ashes clean over the ground ; which done, you shall with a very long plough tear up the earth into great and deep furrowes, and divide it into Land, as you shall think meet and convenient, laying them higher, and flatter, as you shall have occasion, and as the ground lyeth more or leſſe within the danger of water, whether it be the over-flowing of some neere neighbouring Brooks

Brooks or Rivers ; or elſe other ſtanding water occaſioned by Raine and extraordinary Showres, which muſt be carefully lookt unto ; becauſe all over-flows and inundations of water is a mighty deſtroyer and conſumer of grain ; but theſe barren grounds of which I now write, are very ſeldome oppreſt with water ; for moſt commonly they lye ſo high, that the continuall dryneſſe thereof is a ſtrong occaſion of the much unfruitfulneſſe. After you have thus burnt your baite, and plowed up your ground, you ſhall then with your hacks hack it into ſmall pieces, in ſuch manner as was declartd in the former Chapter ; then you ſhall (if the ſea be any thing neer you) ſand it with ſalt ſand (as before ſaid) then lime it, and after, manure it either with Oxe-dung, Horſe-dung, rotten Straw, mudde of Ponds and Ditches, the ſpiteling of Houſe-floores, or ſweeping of Channels and Streets, or ſuch like; or for want of all theſe, in caſe you dwell neer unto the Sea-coaſt (where manure for the moſt part is in greateſt ſcarcity, and the hardeſt to be come by) you ſhall gather from the bottome of the rocks (where the ſeydge of the Sea continually beareth) a certain black weed, which they call Hemp-weed, having great broad leaves, and growing in great abundance, in thick tufts, and hanging together like peaſe-ſtraw ; and with theſe weeds you ſhall cover your lands all over of a pretty good thickneſſe, and then forthwith you ſhall plow it again ſomewhat deeper, and with ſomewhat greater furrowes then before, raiſing up the new quick earth to intermingle, and mixe with thoſe manures and helps which thou haſt formerly prepared and laid upon the ground ; then you ſhall again hack it and harrow it ; then you ſhall take Pigeons dung, or Pullens dung (that is, any kind of land fowl whatſoever, but by no meanes any water fowle) or Pigeons dung and Pullens dung mixt together, and allowing to every acre two or three buſhels thereof, which is the true quantity of ſeed proportioned for the ſame, and this dung being broken and maſht into ſmall pieces you ſhall put into your Syclop or Hopper, and in the ſame manner as you ſow your corn, you ſhall ſow this dung upon the ground, and then immediately after it you ſhall ſow your Wheat, either ſteept in brine, or elſe ſalt Sea-water, or unſteept as you ſhall think good, but in caſe you can neither get ſalt ſand

Cauſes of unfruitfulneſs.

An Excellent Manure.

Of Plowing.

Of divers Manures.

Mixture of Mannures.

ſand nor Sea Rock-weeds, then you ſhall by no means omit the ſteeping of your Seed; neither ſhall you fail before you ſow your Seed, to mixe with your pidgeons and pullens dung, a full equall part of Bay-ſalt well dryed and broke, and ſo ſown with the dung upon the land, and then the ſeed after it; which done, you ſhall harrow it again, clot it, ſleight it, and ſmooth it, in ſuch ſort as was formerly declared in the former Chapter, for theſe labours have no alterations, but muſt in all points be done as was before ſet down.

Of weeding.

Now touching the weeding of this earth, after the Corn beginneth to grow about the ground, there is no fear to be had either of Thiſtles, Tares, Cockles, Darnell, Docks, and ſuch like ſtrong weeds, which indeed are the iſſues of good grounds ill ordered and handled; but the weeds which you ſhall moſt feare in this place, is young Gorſe, or Furrs, or elſe young broome, which are very apt to grow from the leaſt part or parcell of roots that ſhall be left behind; Nay the very nature of thoſe barren earths is ſuch, that of its own accord it will bring forth thoſe weeds: the cold ſharpneſſe of the air mixing with the ſterility & roughneſſe of the earth, being the cauſe that it will give life to no other better plants; therefore ſo ſoon as you ſhall behold any of them to appear above the earth, thongh they be not half a finger high, you ſhall preſently with all diligence pull them up by the rootes, and caſt them away, or lay them in heaps that they may be afterwards burnt, and the aſhes ſprinkled upon the ground: and herein is to be obſerved, that the younger and the ſooner that you do pull up theſe weeds, the better it is, and the eaſilier they will come from the earth, and the ſooner be deſtroyed: for all thoſe mixtures wherewith already you have been taught to mixe your earth, are in themſelves ſuch naturall enemies to all theſe kind of barren weed, that ſhould you omit the manuall labour of deſtroying them (which no good husband willingly will do) yet in time the earth of it ſelf, and the often plowing of the ſame would leave no ſuch offence of weeds, or other growths which might hinder the corn.

Time for Weeding.

Now touching the beſt time when to pull away theſe weeds though generally it muſt be done aſſoon as they do appeare above the ground; yet it ſhall not be amiſſe for you to defer the work

work till after a ſhowre of raine, and then immediately after the ground is wet (and ſo by that means more apt and willing to open and forſake the root faſtned within it) you ſhall with all diligence pull them out of the ground, and deſtroy them : neither ſhall you pull them out of the ground with your hands only ; for the Gorſe have exceeding ſharp pricks, ſo that with your naked hands you are not able to touch them, and to arme your hands againſt them, with ſtrong thick gloves, would be too boiſterous and comberſome, ſo that ſometimes you might either miſſe the weeds, and pull up the corne ; or elſe pull up the Corn and weeds both together ; therefore to prevent all theſe caſualties or hinderances, you ſhall take a paire of long ſmal wooden Nippers, made after the forme of this figure.



And with theſe you ſhall pull the weeds out of the ground, and caſt them into the furrows by the ſides of the Land; till your dayes work be finiſhed, and then with a rake you ſhall rake them together, and ſo lay them in heaps to dryе and wither, in more convenient places; that when time ſhall ſerve, you may burn them, and uſe them, as was before declared.

Gathering of ſtones.

Laſtly, you ſhall have great reſpect, that if this ground be very much troubled with looſe ſtones, as flint, pibble, and ſuch like, that then you very carefully get them gathered from the ground, both before and after you have plowed it, and to lay them on heapes in other vacant places, where they may ſerve for pavings, and ſuch like purpoſes when time requireth : but if the ground be over-run with great or elſe ſmall Limeſtones, as for the moſt part theſe barren grounds are ; then ſhall you with all care gather them up, and lay them in great heapes in ſome corner of your field where you may make a convenient Lime kiln, and ſo there burn theſe ſtones thus gathered, which will be

both an infinite profit, and an infinite eaſe to the reſt of your labours.

CHAP. IV.

Of the ordering, Tilling, and Dreſſing of all rough barren Clayes, whether ſimple or compound that are over-runne with Whinnes, and ſuch like.

NExt unto this barren Clay which is over run with Furſe, Broom, and ſuch like, I will place that barren and unfertile earth, being alſo a Clay, whether ſimple or compound, which is over-run onely with Whinns, and indeed bearing little or no other burthen, or if it doe bear any other burthen as ſome little ſhort moſſie graſſe, yet is that graſſe ſo covered over with theſe ſharp Whinns, that not any beaſt dare put his noſe to the ground, or bite upon the ſame; and indeed this kind of earth is not any whit at all leſſe barren than thoſe of which I have already written, but rather more, in that the malignant qualities thereof are not ſo ſoon corrected, nor yet the vertues ſo ſoon reſtored.

What whinnes are.

Whinnes are a certain kind of rough dry weeds, which grow buſhie and thick together, very ſhort and cloſe unto the ground, being of a dark brown colour, and of crooked growth, thick and confuſed, and full of knots, and thoſe knots armed with hard, long ſharp pricks like thorns or bryars, they have little brown leaves which ſhaddow the pricks, and do wind their branches ſo one into another, that they can hardly be ſeparated, yet is not their growth at any time little more than a handfull above the earth, only they ſpread exceedingly, and will runne and cover over a whole field, choaking up all ſorts of good plants whatſoever, and ſuffering the beſt graſſe that is, to moſſe and filthineſſe: wherefore if at any time you be Maſter of any ſuch naughty and barren ground, and would have it reduced unto goodneſſe and fertility, you ſhall firſt take a fine thinne paring ſhovel made of the beſt iron, and well ſteeled, and hardned round about the edges, according to the form of this figure following.

And



And with this paring-ſhovel, you ſhal firſt pare up all the upper ſwarth of the ground, about two inches, or an inch and a halfe thick at the leaſt, and every paring would be ſome three foot in length at the leaſt, and ſo broad as the ſhovell will conveniently give it leave, and this ſwarth thus pared up, you ſhall firſt turne the Whinny or graſſe ſide downward, and the earth ſide upward, and ſo let it lye two or three dayes in the Sunne to drye (for this worke is intended to begin in the month of *May*,) and when that ſide is well dryed, you ſhall turn the other ſide, and drye it alſo, then when all the ſwarth is dryed, you ſhall gather ſix or ſeven peeces together, and turning the Whinny or Graſſe-ſide inward, and the earth ſide outward, you ſhall make round hollow little hils thereof, much according to the faſhion of this Figure following.



And the inward hollowneſſe like unto the hollowneſſe of an Oven, but much leſſe in compaſſe: which done, you ſhall fil the hollowneſſe with dry ſhips, and ſmall ſticks or Furſe and Straw

mixed together, which you ſhall put in at the vent-hole which ſhall be left on one ſide of the hill, and kindling it with fire you ſhall burn all that ſwarth in ſuch ſort as you burnt the roots of your Furſe and broom before; for this is alſo called a burning of baſt, as well as the former; for it is a moſt principal nouriſher of the earth, and a very ſudden deſtroyer of all malignant weeds whatſoever.

Breaking of Baites. After the burning of your hills, as ſoon as the fire is utterly quenched and gone out, and no heat at all left in the hills; you ſhall then with clotting beetles beat them all down to duſt, and then with ſhovels you ſhall ſpread the aſhes quite over all the ground, as was before declared in the former Chapter: and herein is to be noted, that you muſt place theſe hills as thick and cloſe together as by any means poſſibly you can; making your hills ſo much the leſſe and lower, that they may ſtand thicker and nearer together, and ſo cover more grouud, and thereby the heat and ſtrength of the fire to diſperſe it ſelf over all that peece of ground: for the fire burning upon the earth, doth as much good for the inriching of the earth, and deſtroying of the weeds, as the aſhes doth which are ſpread upon the ſame.

Plowing. Now after your baſte is in this manner burned and ſpread, you ſhall then (as was before ſhewed) plow up your ground in good large furrowes, then hack it very ſmall, Sand it, Lime it, and manure it; and of all manures, there is not any better for this ground than Oxe-dung, and aſhes well mixt together; of which aſhes, thoſe of bean ſtraw, Peaſe-ſteaw or any other ſtraw are beſt; and thoſe of Wood; or Fern next, & thoſe of Sea-coal or Pit coal are the worſt of all. Swines dung is not much amiſſe for this ground, for though it be a great breeder of weeds and thiſtles in good and fertile grounds, yet in this cold hard and barren earth it worketh no ſuch effect, but is a great comforter and warme moyſtner of the ſame.

After you have thus made your ground; as ſoone as Wheat ſeed-time commeth, which is the latter end of *September* and beginning of *October*, you ſhall then with great care plow over your ground again, and take great reſpect that you turn up your furrowes much deeper than before, and that for two ſpeciall cauſes;

cauſes; the firſt, that the new earth may the better be mixt with the old earth, and thoſe helps that are added thereunto; and ſecondly, that you may be ſure to tear up the roots of all the Whinnes from the very bottome of the earth, not ſuffering any part of them to remain behind, and for this purpoſe it ſhall not be amiſſe to have an idle boy or two to follow your plow and to gather away all the rootes that ſhall be torn up, or any way elſe left bare above ground, which rootes ſhall be laid on heaps in convenient places, and then after burnt, and the aſhes thereof ſpread upon the ground: which will be a very great comfort unto the ſeed, being a ſpeedy help unto the ſprouting thereof, and a very warm comforter of the root after the ſtemme is ſpindled above ground, for in theſe cold barren earths nothing doth ſo much ſpoyl and ſlay corn, as the dead coldneſſe which lyeth at the root thereof; for in many of theſe unfertill places, you ſhall ſee Corn at the firſt ſowing (whilſt there is a little ſtrength in the ground) ſprout in great abundance, promiſing much hope of the profit: but when it ſhould ſpindle and come to much better perfection, that poor ſtrength being ſpent and conſumed, and the cold and dryneſſe of the ſoyl, having as it were over-come all matter of comfort, then preſently you ſhall ſee the blade of the Corn turn yellow, the ſtemme or ſtalk to wither, and either put forth no ear at all, or elſe a very poor little empty one, being laden with nothing but a moſt dry chaffie huske without ſubſtance. But to come again to our purpoſe, after you have thus plowed up your ground the ſecond time, you ſhall then hack it again, and harrow it, as was declared in the former Chapters; then you ſhall take your ſeed-wheat which hath been ſteept either in brine or Sea-water, and to every buſhel of that ſeed you ſhall adde a buſhel of bay-ſalt, and mixe them very well together in your Hopper or Sydlop, and ſo ſow them together upon the ground, obſerving to double your caſt ſo oft, that you may not fail to caſt that true quantity of ſeed into the earth which otherwiſe you would have done if ſo be there had been no mixture at all, for to do otherwiſe were to deceive the ground, and a handfull of ſeed ſo ſaved would be the loſſe of a peck in the time of Harveſt; therefore have great reſpect that your ground have his due; for it is no

more coſt, though it be a little labour.

Harrowing. When your ſeed is ſown, you ſhall harrow it again the ſecond time, clot, ſmooth it, and ſleight it, as was before declared in the former Chapters.

Weeding. As touching the weeding of this ground, it is the leaſt labour of all other, for the earth being ſo corrected as is before ſhewed, it wil naturally of it ſelfe put forth no weeds, eſpecially if you remember to plough it deep, and be ſure to tear up and gather away all the quick rootes, otherwiſe if that labour be any thing neglected, then wil it put forth both Whins and great ſtore of other rough weeds, which as ſoon as you ſhal perceive to appear, you ſhall preſently with your wooden nippers pull them up by the roots, as was at large declared in the foregoing Chapter.

Profits. Now for the general profit of this ground thus made and prepared, it is the ſame that the two former are, that is to ſay, it wil bear you good and ſufficient Wheat, in plentifull abundance for the ſpace of two or three years; then barley, a year after; then Oats three years together after the barley; and peaſe or beans a year after the oats; then Laſtly, very good Meadow or Paſture, for the ſpace of three or four yeares after, and then you ſhall begin and dreſſe it again, as was formerly declared.

CHAP. V.

Of the ordering, Tilling, and Dreſſing of all barren Clayes, whether ſimple or compound, which are over-run with Ling or Heath.

THere followeth now ſucceſſively another ſort of barren earth, which indeed is much more ſterile and barren then any of the other formerly written upon: becauſe they, out of their own nature, doe beare a certain kind of graſſe or food which will relieve ordinary hard ſtore-Cattel, whether it be Sheep, Goats, or young beaſts; But this earth, of which I am now to entreat, beareth no graſſe at all, but onely a vile filthy black brown weed, which we call Ling or Heath, the tender tops whereof Cattell and wild Deer will ſometimes crop, yet it is to them but little relief, and only maintaineth life and no more.

Now

Now albeit ſome may object unto me, that this kind of ſoyle is ever a ſandy ſoyle and no clay, as may be ſeen in moſt Chaſes, Forreſts, and Downs: yet I anſwer, that albeit it hold ſo in general; yet there are divers clayes, eſpecially in mountainous Countries, that are peſtered with theſe kind of weeds, as may be ſeen in the North, and North-weſt part of *Devonſhire*, in ſome parts of *Cornwall*, and in many parts both of North and South *Wales*; and theſe clay grounds which are thus offended with theſe weeds of Ling or Heath, are much more barren and unfruitful than the Sands, becauſe of their much more coldneſſe; yet thoſe clayes which are mixed with either black Sand, dun Sand or yellow Sand, and over runne thus with Heath or Ling, are the moſt barren of all. To make any further deſcription of this Heath or Ling, being a thing ſo notoriouſly known over all this Kingdome, I hold it meerly needleſſe, only to ſay it is a rough brown weed, ſhooting out abundance of ſtalkes from one root, with little dark leaves, and flowers on the top, of a pale reddiſh colour, much inclining unto Peach colour at the firſt: but being full blown, they are then a little more whitiſh.

You therefore that have any ſuch ground, and deſire to bring it to fruitfulneſſe, and the bearing of good Corn and Graſs in a reaſonable abundance, you ſhall firſt with ſythes or ſharpe hooks (but old ſythes are the better) cut down all the Heath, or Ling, which groweth upon the earth you intend to convert to goodneſſe, ſo neere the ground as poſſibly you can; then when it is cut down (which would ever be at the beginning of the Month of *May*) you ſhall let it lye upon the ground, dayly toſſing and turning it till it become very drye, then ſpreading it all over the ground, and mixing or covering it with drye ſtraw of any kind whatſoever, you ſhall preſently ſet it on fire in ſo many ſeveral corners of the field that all the ſeveral fires in the end may meet in one poynt, and not leave any part of the movven Heath or Ling unburnt, or any part of the ground unſcorched; After this is done, and the ground cooled, you ſhall with your flat dotting beetles beat the aſhes hard into the ground, then you ſhall take a ſtrong plow, with a broad winged ſhare and an even coulter, and you ſhall plow up all this ground thus burnt in

Deſtroying of Heath.

in very large and deep furrowes by no meanes picking out any of the quick roots which ſhall remain in the furrows ſo turned up, but letting them reſt in the earth ſtill; then with your hacks, and the help of your iron paring ſhovel, you ſhall cut up the furrowes, formerly turned up, into ſhort pieces of three foot, or three foot and a half long, and ſome leſſe as occaſion ſhall ſerve: then with theſe pieces, you ſhall build little hollow hills, ſuch as in the former Chapter you made of the upper ſwarth of the ground only; and then filling the hollowneſſe with dry heath, and dry ſtraw mixt together, you ſhall ſet every hill on fire, and ſo burn the very ſubſtance of the earth into aſhes, which will ſoon be done by reaſon of the infinite number of roots and ſmall ſtrings, which lye mixt in the earth, and the dryneſſe thereof occaſioned by the former burning: And this is another kind of burning of baite, much differing from all the former, and yet to as great end and profit as any whatſoever; and theſe hills muſt, as the former, be placed one as neer another as is poſſible, ſo as they may ſpread and cover over the greateſt part of the ground, and leaving no more than a good reaſonable path to paſs between hill and hill.

Another burning of Baite.

Now as ſoon as you have burned all your baite, and that your hills are cold, you ſhall then as was before ſhewed in the former Chapters, with beetles and ſhovels break down the hils, and ſpread the earth and aſhes over all the ground; which done, you ſhall ſand it (if the ſituation of the ground be anſwerable thereunto) and lime it in ſuch ſort as was ſhewed in the ſecond Chapter; then when it is limed, and the lime equally ſpread, not more in one place than in another, you ſhall then manure it with the beſt manure you can provide, of which there is none better or more proper for the ground than mans ordure, and the rubbiſh, ſweepings, parings, and ſpitlings of houſes mixt together: for want of this (becauſe it may not be in ſo great plenty as other manures) you may take either old Oxe dung, or Horſe dung, or for want of them the old rotten and muddy ſtaddles or bottomes of Corn ſtacks of Reeds, eſpecially Peaſe-ſtacks, or Bean ſtacks; provided that it be thoroughly rotten; for the leſſe rotten it is, the worſe it is. Alſo the ſcowrings of common Sewers, and eſpecially thoſe through

through which much of mans urine doth passe is a most wonderfull and beneficial manure for these grounds, so are also the scowring of sinks and channels, which come from Kitchins and wash-houses, where great store of brine and salt broath is shed, & other greasie, fat, and putrified substances, as also abundance of sope-suds, and buck-ashes, and other sope and lee-washings, than which there is no better manure that can be used for these kind of grounds.

After your ground is thus perfectly made and manured, and that Wheat seed time doth draw on, which (as before was shewed) is ever at the latter end of *September*, you shall then plow up your ground again in that manner as was shewed for the former earths, to wit, much deeper than before: for you are to understand that this ground being dreft as is before declared, there will remain nothing of the furrows which were first plowed up but the ashes, which being covered with sand, lime, and manure, the earth will lye plain and level, so that of necessity you must raise up new furrows of new earth, which being done, you shall then with your hacks, cut all the new earth into very small pieces, mixing them well with the other mould made of sand, lime, manure and ashes; then as was before said, you shall harrow it to make the mixture so much the better, and the mould so much the finer; and then if it have been sanded, you may sow your seed-wheat simply of it self, without any doubt of the plentifull increase thereof; but if it have not been sanded then as in the foregoing Chapter, you shall not only steep your Seed in brine (as before shewed) but also you shall mixe your Seed with Bay-salt, and so sow it into the ground; or if at the time of sowing (after it is plowed, hackt, and harrowed) you bestow either Pigeons dung, or Pullens dung, or Sheeps dung upon the land, it will be much better, and the corn will give a much greater increase. Now as soon as your land is sown, you shal then forthwith harrow it again, and cover the seed very close; then you shall clot it, smooth it, and sleight it (as was before shewed.)

As touching the weeding and cleansing of this earth after the Corn is sprung up, you shall understand that there is great care to be had thereunto, for this ground is much subject unto weeds, Weeding.

and thoſe of the worſt kind: for although for the moſt part it will be free from all manner of ſoft and tender weeds, as thiſtles cockle, darnel, ketlocks, docks, rape, and ſuch like herball ſtuff, yet it is much ſubject to twitch bryars, which grow at both ends, Ling, Wild-time, and ſuch like, any of which as ſoon as you ſhall ſee to appear, or peep above the earth, you ſhall preſently with your Nippers pull them up by the rootes, and not ſuffer them in any wiſe to look a handfull above the ground; for if you do, their hardneſſe is ſo great, and their roots ſo large & faſt fixt into the mould, that you can by no means pull them away without great loſſe and hurt to the grain, pulling up with them all ſuch roots of Corn, as ſhall be fixed near about them: for any other weak and ſuperfluous things which ſhall grow from the Land, you may with ordinary weeding hooks cutt them away; as for long graſſe, whether it be ſoft or ſedgie, or any other ſuch like ſtuff, you ſhall not ſtirre it, but let it grow: for it keepeth warm the roots of your Corn, and giveth nouriſhment and increaſe thereunto. Now for the profit of this ſoyl thus ordered and husbanded, it is equall with any of the former, and will bear Wheat very plentifully for the ſpace of the three firſt years; good Barley the fourth year, with the help of the ſheep fold (as was before ſaid) and good Oats the fifth, ſixth and ſeventh years; and very good ſmall Peaſe, the eighth year (for beans this ſoyl will very hardly bear at all) & the ninth, tenth, and eleven year it will bear very good meadow (though not altogether very fine pure graſs, yet very good feeding & wholſome graſs) or ſo good paſture as a man can reaſonably require for any holding Cattell whatſoever; nay, it will alſo indifferently well feed, and fat Cattell, though peradventure it requireth a little longer time than other finer ground will.

CHAP. 6.

Of the ordering, Tilling and Dreſſing, of all plain ſimple barren Sands, bearing nothing but a ſhort meſſie graſs.

HAving thus (in as large manner as I hope ſhall be needfull for any judicious or indifferent Reader) written of the natures, Orderings, Plowings, and Dreſſings, of all manner of bar-

ren

ren and unfruitfull Clayes, whether they be ſimple of themſelves, or elſe compounded with other earths, as Sands, Chalks, gravels, and ſuch like; ſhewing by thoſe naturall burthens which continually of their own accord they do produce (which indeed is the eaſieſt and ſafeſt way of knowledge) how to amend and better them, and bring them to that perfection of fruitfulneſſe that the beſt earth ſhall but in a very ſmall degree exceed them, nay, hardly any thing at all, except in the ſaving of a little charge and ſome labour, without which nothing is to be obtained by the Husbandman ; neither is this charge or labour thus beſtowed on theſe barren grounds to be grutcht at by any honeſt mind ; ſince the worſt crop of tenne or eleven, will make good his charge and toyle with a reaſonable intereſt ; ſo that I make account, nine or tenne years profits come into his barnes without purchaſe, for it is to be intended that all theſe earths formerly ſpoken of, are not to be dreſt, or to put the Husbandman to any charge more than the firſt year of tenne or eleven for the ſecond year he ſhall as ſoon as he hath gathered his Wheat off, which will be in *Auguſt*, and finiſht other parts of his Harueſt, preſently put his Plow into the ſame Wheat-ground again, and plow it up, hack it, and hartow it, ſow it, harrow it again, clod it, and weed it, as in the former year, and ſo conſequently of all the reſt of the years following, whereby you perceive that all labours and charges are ſaved more than once plowing and ſowing.

This then conſidered, it neceſſarily now followeth that I ſpeak of the bettering, and bringing, into perfection, of all manner of barren ſand grounds, being ſimply of themſelves, without any mixture of other earths, except one and the ſame kind, as ſand with ſand, though peradventure the colours of the ſands may alter: as red with white, yellow with black, &c. which in as much as the whole ſubſtance is ſand without any contrary mixture, there it may well be called ſimple and not compound ; and of theſe ſands, I purpoſe to intreat, as formerly I did of the clayes ; that is to ſay, by their outward faces and Characters, which are thoſe burthens and increaſes, which of their own proper nature without any help or compulſion of any others, they produce and bring for into the World.

And first of that naughty cold and barren sand which lying upon high, stony, and mountainous Rocky places, or else upon lower cold bleak Plaines, subject to the North, and North-East winds and tempests, or bordering upon the Seas, doth not bring forth any thing but a short mossie grasse, which the Sun maketh bitter, and the cold dews fulsome and unsavory in tast. If any man then be master of such unprofitable and unfruitfull earth, and desire to have it brought to goodnesse, and perfection, you shall first, at the beginning of the spring, as about middle *April* or earlier, with a strong Plow answerable to the soyle, yet somewhat lesse, both in timbers, and irons, then that wherewith you plow your Clay ground, plow so much of that earth up as you may conveniently compass, to sow and dresse exactly, & perfectly for to undertake more, were to make all unprofitable, and to cast away much labour and charge, without any profit. This ground you shall plough of an indifferent depth, though not so deep as the Clays; you shall lay the furrows though flat, yet close one to another, without leaving any bulke between, but ploughing all very clean, yet not so very clean and close together, that you may lay the green swarth, to the new ploughed or quick earth; but rather turn one swarth against another, so as the furrows may lye, and no more but touch the edges one of another: This when you have done, you shall then with your hacks, cut and break all the earth so turned up into very small peeces, and not only the earth so turned up into very small peeces; but also other green swarth which was left unplowed; provided that before this labour of hacking, you let the ground lye certain dayes in the furrows, that one swarth heating and scalding the other, they may both equally rot and grow mellow together: which once perceived by the blacknesse thereof, you may then at your pleasure hack it, and cut it; as is before declared.

Plowing.

Now some may in this place object unto me, that this labour of hacking should be needlesse, in as much as all sand grounds whatsoever are out of their own nature so light, loose, and willing to dissever, that this toyl might very well and to good purpose be saved.

Objection.

To this I answer, that true it is, most sands in their own natures

Answer.

tures are looſe, and light, and willing to diſſever into fine mould without any extremity, eſpecially rich and fruitfull ſands whoſe predominant Quality of warmth, giveth nouriſhment and increaſe: but theſe barren and cold ſands, in which is a certain ſtigmatique toughneſſe, and moſt unwholſome dryneſſe, are of a clean contrary nature, and through the ſtony hardneſſe thereof, they are as unapt to break and diſſeuer, as any Clay whatſoever. beſides, the ſwarth being of a tough moſſie ſubſtance (which ever carrieth a hard ſtrong root anſwerable with the cold in which it is ingendred) doth ſo conſtantly bind, fetter, and hold the mould together, that it is impoſſible for any harrow to break it in peeces, or to gather from it ſo much mould as may ſerve to cover the Corn and give it root when it is ſown into the ſame: and therefore this work of hacking is neceſſary.

When therefore you have thus hackt your land and diſtributed the mould into many ſmall peeces, you ſhall then with all expedition Marle it; which foraſmuch as it is no generall nor common practiſe in every part of this Kingdome, I will firſt tell you what Marle is, and then how to find it, digge it, and uſe it for your beſt behoof. Of Marling.

Marl, you ſhall then underſtand, is (according to the definition of Maſter *Bernard Palliſſy*) a natural, and yet an excellent ſoyl, being an enemy to all the weeds that ſpring up of themſelves, and giving a generative vertue to all ſeeds that are ſown upon the ground: or (for the plain husbandmans underſtanding) it is a certain rich, ſtiffe, and tough clay, of a glewie ſubſtance, and not fat or Oyly, as ſome ſuppoſe. This Marl is in quality cold and dry, and not hot (as ſome would have it) and it was earth before it came to be Marle, and being made Marle yet it is but a Clay ground: all Chalk whatſoever was Marl before it was Chalk, and all manner of ſtones which are ſubject unto Calcination or burning, as Lime-ſtone, Flint or the like, were firſt Marl before they were ſtones, and only hardned by accident and ſo not poſſible to be diſſolved but by the fire: as for Marle it ſelf, when it is a little hardned, it is onely diſſolved by froſts and nothing elſe, and thence is the cauſe that Marl ever worketh better effect the ſecond year than the firſt. ☜ Additions.

This Marle hath been made ſo precious by ſome writers, that

it hath been accounted a fift element, but of this curiosity I will not now dispute.

Touching the complexions or Colours of Marle, there is some difference; for though all conclude there are four severall colours in Marle, yet one saith, there is a White, a Gray, or Russet, a Black and Yellow; another saith, there is a Gray, a Blew, a Yellow, and a Red; and a third saith there is a Red, and White, mixt like unto Porphery. And all these may well be reconciled, and the colours may alter according to the climate and strength of the Sun: So that by these Characters, the colour, the toughnesse, and the loosenesse when it is dryed, any man of judgment may easily know Marl, from any other earth whatsoever. This Marle is so rich in it self, and so excellent for continuance, that it will maintain and enrich barren grounds, the worst for tenne years, some for a dozen, and some for thirty years; yet there is a great respect to be had in laying of this Marl upon the ground, that is to say, that you lay it neither too thick nor too thinne, that you give it neither too much, nor too little; for any of these extremities are hurtfull; and therefore hold a mean, and see there be an indifferent mixture between the Marle and the earth, on which it is laid.

For the generall finding out of this Marle, there is no better way for readinesse, and the saving of charges, than by a great Augure or wimble of Iron, made to receive many bits one longer than another, and so wresting one after another into the ground to draw out the earth, till you find you are come to the Marle, which perceived, and an assay taken, you may then digge at your pleasure.

Now for the places most likely where to find this Marle, it is commonly found in the lowest parts of high Countries, neer Lakes and small Brooks, and in the high parts of low Countries, upon the knols of small hills, or within the Clifts of high Mountainous banks, which bound great Rivers in: to conclude, you shall seldome find any of these barren sands but they are either verged about with Marle grounds, or if you will bestow the labour to digge below their sand, you shall not faile to find either Marl, or some quarry of stone or both; for in some places Marle lyeth very deep, in other some places within a

a ſpades graft of the upper ſwarth of the earth : therefore it ſhall be good for you to make proof of all the moſt likely parts of your ground to find out this Marle ; and as ſoon as you have found it out, you ſhall with Mattocks and Spades digge it up and carry it to your land, there laying it in bigge round heaps ; and ſetting them within a yard or two one of another ; thus when you have filled over all your ground (which would be done with as great ſpeed as might be, for the antient cuſtome of this Kingdome was, when any man went about to Marle his ground, all his Tenants, Neighbours and Friends, would come and help him to haſten on the work) you ſhall then ſpread all thoſe heaps, and mixing the clay well with the ſand, you ſhall lay all ſmooth and level together ; and herein is to be obſerved, that if the land you thus Marle ſhall lye againſt the ſide of any great Hill or Mountain, whereby there will be much deſcent in the grond ; then you ſhall (by all means) lay double as much Marle, Sand, or other compoſt on the top of the Hill as on the bottome, becauſe the rain and ſhowrs which ſhall fall, will ever waſh the fatneſſe of the earth down to the loweſt parts thereof.

Now in the laying of your Marle, you are to hold this obſervation, that if you lay it on hard and binding grounds, then you are to lay it in the beginning of Winter : but if on grounds of contrary nature, then it muſt be laid in the ſpring or Summer. Again, you ſhall obſerve, that if you cannot get any perfect and rich Marle, if then you can get of that earth which is called Fullers-earth, and where the one is not, commonly ever the other is, then you may uſe it in the ſame manner as you ſhould Marl, and it is found to be very neer as profitable.

When your ground is thus marled (if you be neer to the ſea-ſide) you ſhall then alſo ſand it with ſalt ſea-ſand, in ſuch ſort as was formerly declared, onely you may forbear to lay altogether ſo much upon this ſand ground as you did on the Clay ground, becauſe an half part is fully ſufficient. If you cannot come by this ſalt-ſand, then inſtead thereof, you ſhall take chalk, if any be to be had neer you, and that you may lay in more plentifull manner than the ſand ; and albeit it is ſaid, that

Additions : Obſervations.

Of Chalk and the uſe.

that Chalk is a wearier out of the ground, and maketh a rich tather, yet a poor ſoon; in this ſoyl it doth not ſo hold, for as it fretteth and waſteth away the goodneſſe that is in Clay grounds, ſo it comforteth and much ſtrengtheneth the ſand-earths: and this Chalk you ſhall lay in the ſame manner as you did your Marle, and in the ſame manner ſpread it and level it; which done, you ſhall then Lime it, as was before ſhewed in the Clay grounds; yet not ſo abundantly, becauſe alſo a half part will be ſufficient; after your Liming, you ſhall then manure it with the beſt manure that you have, whether it be dung of Cattel, Horſe, Sheep, Goats, Straw, or other rubbiſh; and that being done, and ſeed time draweth on, you ſhall then plow up your ground again, mixing the new quick earth and the former ſoyles ſo well together, that there may be little diſtinguiſhment between them: then you ſhall hack it againe, then harrow it, and laſtly ſow it with good, ſound, and perfect ſeed: and of ſeeds, though Wheat will very well grow upon this earth, yee Rye is the more naturall and certain in the increaſe: yet according to the ſtrength of the ground, you may uſe your diſcretion, obſerving that if you ſow Wheat, then to ſteep it before in brine or ſalt ſea-water, as was before deſcribed; but if you ſow Rye, then you ſhall ſow it ſimply without any helps, except it be Pigeons-dung, or Bay-ſalt ſimply of it ſelf, in ſuch manner as hath been before declared either ſowing the ſalt with the Corn or before the Corn, as ſhall ſeem beſt in your own diſcretion.

After your ſeed is ſown, you ſhall then harrow it again, clot it, ſmooth it, and ſleight it, as before is ſhewed in the ſecond Chapter, which done (after the Corn is ſhot above the earth) you ſhall then look to the weeding of it, being ſomewhat a little too much ſubject to certain particular weeds, as, are Hare-boules wild Cheſſe-bolles, Gypſie-flowrs, and ſuch like, any of which, when you ſee them ſpring up, you ſhall immediately cutt them away cloſe by the roots; as for tearing their roots out of the ground with your Nippers, it is not much materiall, for the cutting of them is ſufficient, and they will hardly ever again grow to do you any hindrance; many other weeds there may grow amongſt theſe, which are alſo to be cut away, but theſe are the principal, and of moſt note; whereof as ſoon as you have clean-

ſed

ſed your lands of theſe and the reſt, you ſhall then refer the further increaſe of your profit unto Gods providence.

Laſtly, you ſhall underſtand that this ground being thus plowed dreſt and ordered will without any more dreſſing, but once plowing and ſowing, every year bear you good Wheat or good Rye three yeares together; then good Barley the fourth year; good Oats, the fifth ſixth and ſeventh years; excellent good Lupius the eighth year, and very good Meadow or Paſture three or four years after, and then it ſhall be neceſſary to dreſs it again in ſuch manner as was before deſcribed. The profites.

CHAP. 7.

Of the Plowing, Tilling, Ordering, and inriching of all Barren Sand, which are laden and over-runne with Braken, Fern, or Heath.

NExt unto this plain, cold, barren Sand, which beareth no other burthen but a ſhort moſſie graſſe, I will place that Sand which is laden and over-runne with Braken, Fern, or Heath, as being by many degrees more barren than the former, both in reſpect that it is more looſe and leſſe ſubſtantiall, as alſo in that it is more dry and harſh and altogether without nutriment, more than an extream ſterile coldneſſe, as appeareth by the burthen it bringeth forth, which is Braken or Fern, a hard, rough, tough weed, good for nothing but to burn, or elſe to litter ſtore beaſts withall, for the breeding of manure; or if you ſtrow it in the high wayes where many travellers paſſe, it will alſo there turn to good reaſonable compoſt.

Of this kind of ground if you be maſter and would reduce it unto fertility and goodneſſe, you ſhall firſt, whether the braken be tall and high (as I have ſeen ſome as high as a man on horſeback) or ſhort, and low (and indeed moſt commonly theſe barren earths are, for tall Fern or Braken ſhewes ſome ſtrength in the ground) you ſhall with ſythes firſt mow it down in the month of *May*, then whither it and dry it upon the ground, and after ſpread it as thinne as you can over all the earth you intend to plow; which done, you ſhall bring your plow and begin to plow the ground after this order: firſt you ſhall turn up your furrow, Of deſtroying braken.

and lay it flat to the ground, green-ſwarth, againſt green-ſwarth, then look how broad your furrow is ſo turned up; or the ground ſo covered; and juſt ſo much ground you ſhall leave unplowed between furrow and furrow, ſo that your land may lye a furrow and a green balk, till you have gone over all the ground; then you ſhall take a paring-ſhovel of Iron, and pare up the green ſwarth of all the balks between the furrows at leaſt two inches thick, and into pieces of two or three foot long, and with theſe peeces of earth, and the dry Fern which is pared up with them, you ſhall make little round hollow baite hils as in the third or fourth Chapters; and theſe hills ſhall be ſet thick and cloſe over all the ground, and ſo ſet it on fire and burn it; then when the fire is extinct, and the hils cold, you ſhall firſt with your hacks cut in peeces, all the furrowes that were formerly turned up, and then break down the burnt hils, and mixe the aſhes and earth with the other mould very well together; which done you ſhall then with all ſpeed marl this earth as ſufficiently as poſſibly may be, not ſcanting it of Marle, but beſtowing it very plentifull upon the ſame; which done, you ſhall then plough it over again, and plowing it exceeding well, not leaving any ground whatſoever unturn up with the plow; for you ſhall underſtand that the reaſon of leaving the former balks was, that at this ſecond plowing after the Marl was ſpread upon the ground, the new, quick, and unſtirred freſh earth might as wel be ſtirred up to mixe with the Marl, as the other dead earth and aſhes formerly received, whereby a freſh comfort ſhould be brough to the gronnd, and an equal mixture without too much dryneſſe, and this ſecond Ardor or plowing would begin about the latter end of *June*.

Of Marle.

After your ground hath been thus marled, and the ſecond time plowed, you ſhall then ſand it with ſalt Sea-ſand, Lime it, and manure it, as was declared in the foregoing Chapter: and of all manures for this ſoyl; there is not any ſo exceeding good as ſheeps manure, which although of the Husband mau it be eſteemed a manure but of one year, yet by experience in this ground it hapneth otherwiſe, and is as durable, and as long laſting a compoſt as any that can be uſed, and beſids it is a great deſtroyer of thiſtles, to which this ground is very much ſubject, because

Seading and Liming.

cauſe upon the alteration of the ground the Fern is alſo naturally apt to alter unto thiſtle, as we dayly ſee.

When your ground is thus dreſt and well ordered, and the Seed-time commeth on, you ſhall then plough it again in ſuch manner as you did the ſecond time, that is to ſay very deep, cle, and after the manner of good Husbandry, without any reſt, balks or other diſorders, then ſhall you hack it very well, then harrow it, and then ſow it: but, by mine advice, in any caſe, I would not have you to beſtow any Wheat upon this ſoyl, (except it be two or three buſhels on the beſt part thereof, for experience ſake, or proviſion for your houſhold) for it is a great enemy unto Wheat, and more than the marle: it hath no nouriſhment in it for the ſame, becauſe all that commeth from the ſalt Sand, Lime, and Manure, is little enough to take away the natural ſterility of the earth it ſelfe, and give it ſtrength to bear Rye, which it will do very plentifully; and therefore I would wiſh you for the firſt three yeares onely to ſow the beſt Rye you can get into this ground; the forth year, to ſow barley; the fift, ſixt and ſeventh, Oats; and of Oats, the bigge black Oate is the beſt for this ground, maketh the beſt and kindlieſt Oat-meal, and feedeth Horſe or Cattel the ſoundeſt; as alſo it is of the hardeſt conſtitution, and endureth either cold or dryneſſe much better then the white Oat, the cut Oat, or any Oate whatſoever; the 8th year, you ſhall only ſow Lupins, or Fetches; and three years after, you ſhall let it lye for Graſs, and then dreſſe it again as before ſaid; for it is to be underſtood, that in all the following yeares (after the firſt year) you ſhall beſtow no labour upon this ground, more than plowing, ſowing, hacking, and harrowing at ſeed time only. Plowing and Sowing.

But to proceed to the orderly labour of this ground, after you have ſown your Rye, you ſhall then harrow it again, clot it, ſmooth it, and ſleight it, as was before ſhewed in the ſecond Chapter of this book. And although a man would imagine that the ſandy looſeneſſe of this ſoyl, would not need much clotting, or ſleighting of the Earth, yet by reaſon of the mixture thereof with the Marl and Manure, it will ſo hold and cleave together, that it will ask good ſtrong labour to looſen it and lay it ſo hollow and ſmooth, as in right it ſhould be. Labours after Sowing.

Weeding. Touching the weeds which are moſt ſubject to this ſoyl, they are Thiſtles, and young Brakes, or Ferns which will grow up within the Corn, which before, they riſe ſo high as the Corn, and even as it were at the firſt appearing, you muſt with your wooden Nippers pull up by the roots, and after take up and lay in ſome convenient place where they may wither and rot, and ſo turn to good manure.

CHAP. 8.

Of the Plowing, Tilling, Ordering, and Enriching of all barren Sands which are laden and over-run with Twich or Wild Bryar.

HAving writeen ſufficiently of this hard and barren, waſt, wild, ſandy ground, which is over-run with braken, Fern, Heath and ſuch like. I will now proceed, and unto it joyn another ſand which is much more barren, and that is the ſand that bringeth forth nothing but wild Twitch, Bryars, Thorn-buſh, and ſuch like under-growth, of young miſliking wood, which never would riſe or come to profit, the bitter cold drines of the earth wherein it groweth, and the ſharp ſtormes to which the clime is continually ſubject both day and night, blaſting it in ſuch manner that nothing appeareth but ſtarved, withered, and utterly unprofitable burthens, good for nothing but the fire, and that in a very ſimple ſort. Such grounds if you be Maſter of, and would reduce it to profit and fruitfulneſſe, you ſhall firſt with hooks, or axes, cut up the upper growth thereof, that is, the buſhes, young Trees, and ſuch like; then you ſhall alſo ſtub up the Roots, not leaving any part of them behind in the earth, carrying away both home to your houſe to be imployed either for fuel, or the mending of the hedges, or ſuch like, as you ſhall have occaſion; this done you ſhall take a pair of ſtrong iron harrowes, and with them you ſhall harrow over all the earth, tearing up all the Twitch, Bryers, and rough graſs ſo by the roots, that not any part but the bare earth may be ſeen, and when your harrows are cloyed, you ſhall unlade them in ſeverall places of the ground, laying all ſuch rubbiſh of weeds and other ſtuff which the harrowes ſhall gather up in a little round

Deſtroying of Twitch and Bryar.

round hill, close up together that they may sweat, wither and dry; then spreading them abroad and mixing them well with dry straw, burn them all over the ground, leaving no part of the weeds or grass unconsumed; then without beating in of the ashes, you shall presently plow the ground all over very clean as may be, laying the furrows as close as you can one to anothes and leaving no earth untoucht or untorn up with the plough, which done, you shall immediately hack it into small peeces, and as you hack it, you shall have idle boyes to go by the hackers, to gather away all the rootes which they shall looſen or break from the mould, and laying them on heaps in the worſt part of the ground, they shall there burn them, & spread the ashes thereon; after your ground is thus harrowed, plowed and hackt, you shall then muck it, as was formerly shewed in the sixt Chapter; then shall you sand it, lime it, and manure it as beforesaid.

Manure.

Now of Manures which are moſt proper for this soyle, you shall underſtand that either Ox, or Horse manure, rotten-straw, or the scowring of Yards is very good, provided that with any of these manures, or all these manures, you mixe the broad-leaved weeds, and other green weeds, which do grow in Ditches Brooks, Ponds, or Lakes, under Willow-trees, which with an iron Rake, Drag, or such like instrument, you may easily draw upon the banks, and so carry it to your Land, and there mingle it with the other manure, and so let it rot in the ground; this manure thus mixed is of all other moſt excellent for this soyle, both by the experience of the Antients who have left it unto memory, as also by dayly practise now used in sundry parts of this Kingdome, as well because of the temperate coolneſſe thereof, which in a kindly manner asswages the lime and sand, as also through moysture which distilling through those warme soyles doth quicken the cold starved earth, and giveth a wonderfull encrease to the seed, that shall be thrown into the same.

Harrowing and other labours.

After your ground is thus sufficiently dreſt with these soyles and manures, you shall then plow it again the second time, which would be after *Michaelmas*; after the plowing you shall then hack it again, and be sure to mixe the earth and the manures very well together, then you shall break it in gentle manner

with your Harrows, and then ſow it ; which done, you ſhall harrow it much more painfully, and not leaving any clots or hard earth unbroken that the Harrow can pull in peeces : as touching the ſeed, which is fitteſt for this earth, it is the ſame that is ſpoken of in the next foregoing Chapter : as namely the beſt Rye, or the beſt Maſlin, which is Rye and Wheat equally mixt together, or if there be two parts Rye, and but one Wheate, the ſeed will be ſo much the more certain and ſure holding ; and this ſeed you may ſow on this ground three years together, then Barley, then Oats, and ſo forth, as is formerly writ of the grounds foregoing. After your ground is ſown and harrowed, you ſhall then clot it, ſleight it, and ſmooth it as you did the other ground before, and then laſtly with your back Harrows (that is, with a pair of harrows, the teeth turned upward from the ground, and the back of the harrow next unto the ground) you ſhall run over all the ground and gather from the ſame all the looſe Graſs, Twitch, or other weeds that ſhall any wayes be raiſed up, and the ſame ſo gathered you ſhall lay at the lands end in heaps, either to rot for manure, or elſe at the time of the year to be burnt for aſhes, and ſprinkled on the earth the next ſeed year.

Laſtly touching the weeding of this ſoyl, you ſhall underſtand the weeds which are moſt incident thereunto, are all the ſame you firſt went about to deſtroy; as namely, Twitch rough wild Graſs, & young woody undergrowth, beſides thiſtles, Hare-Botrles, and Gypſie flowrs ; therefore you ſhall have a great care at the firſt appearance of the Corn, to ſee what weeds ariſe with it, (for theſe weeds are ever fully at haſty as the Corn) and as ſoon as you ſee them appear, both your ſelfe and your people wth your hand ſhall pull them up by the rootes, and ſo weed your land as you would weed a garden, or Woad-ground. Now if at this firſt weeding (which will be at the latter Spring commonly called *Michaelmas*, or the Winter ſpring,) you happen to omit and let ſome weeds paſſe your hands unpulled up (which very well may chance in ſo great a work) you ſhall then the Spring next following (ſeeing them as high, or peradventure higher than the Corn) with your wooden nippers pull them up by the roots from the ground, and ſo caſt them away.

As

As touching the cutting them up cloſe by the ground with ordinary weed-hooks, I do in no ſort allow it; for theſe kind of weeds are ſo apt to grow, and alſo ſo ſwift in growth, that if you cut them never ſo cloſe in the Spring, yet they will again over-mount the Corn before Harveſt, and by reaſon of their greatneſſe, toughneſſe, and much hardneſſe, choak and ſlay much Corn that ſhall grow about them, and therefore by all means you ſhall pull theſe weeds up by the roots whilſt they are tender (if poſſible you can) or otherwiſe in their ſtrongeſt growth, ſith their ſufferance breedeth great loſs and deſtruction.

CHAP. 9.

Of their Plowing, Tilling, Ordering, and Enriching of all barren Sands, which are over-run with Moors, or moriſh ſtinking long Graſſe.

UNto theſe foregoing barren Sands, of which I have already written, I will laſtly joyn this laſt barren ſand being of all earths whether Clay or Sand, the moſt barren. And that is that filthy, black mooriſh Sand which beareth nothing but ſtinting putrified Graſs or Moſs, or Moſs and Graſs mixed together, to which not any beaſt or cattel, how coorſly or hardly bred ſoever will at any time lay their mouths; and this kind of ground alſo is very much ſubject to marſhes and quagmires, of which that which is covered with Moſſe, or Graſſe, is the worſt, and that which is tufted above with Ruſhes, the beſt, and ſooneſt reduced unto goodneſſe; in brief, all theſe kind of grounds generally are extreamly moyſt and cold, the ſuperabundance whereof is the occaſion of the infinite ſterility and barrenneſſe of the ſame.

And therefore he that is Maſter of ſuch unprofitable Earth, and would have it brought to ſome profit or goodneſſe, ſhall firſt conſider the ſituation of the ground, as whether it lye high or low: for ſome of theſe mariſh grounds lye low in the Vallyes, ſome on the ſides of hills, and ſome on the tops of Mountains: then whether the much moyſtneſſe thereof be fed by River, Lake, or Spring, whoſe veines not having currant paſſage through, or upon the earth, ſpreads lookingly over all the

the face thereof, and ſo rotting the mould with too much wet, makes it not only unpaſſable, but alſo utterly unprofitable for any good burthen.

Grounds for Fiſh-ponds.

Now if you find that this mariſh Earth lye in the bottome of low valleys, as it were garded about with hills, or higher grounds ſo that beſides the feeding of certain Springs, Lakes, or Rivers, every ſhowre of rain or falling of water from higher grounds bringeth to theſe an extraordinary moiſture to maintain the rottenneſſe, in this caſe this ground is paſt cure for graſs or Corn, and would only be converted, and made into a fiſh-pond, for the breeding and feeding of Fiſh, being a thing no leſſe profitable to the Husbandman for keeping his houſe, and furniſhing the market than the beſt Corn lands he hath; and therefore when he maketh any ſuch pond, he ſhall firſt raiſe up the head thereof in the narroweſt part of the ground, and this head by driving in of ſtakes and piles of tough and hard wood, as Elme, Oak, and ſuch like, and by ramming in of the earth hard between them, and ſadding the ſame ſo faſt that the mould can by no meanes be worn down or undermined with the water, he ſhall bring it to as firme earth as is poſſible, and in the midſt of this head he ſhall place a ſluce or flood gate made of ſound and clean Oak timber, and plancks, through which at any time to drain the pond when occaſion ſhall ſerve: and this done, you ſhall digge the pond of ſuch depth, as the earth conveniently will bear, and caſting the earth upon either ſide, you ſhall make the banks as large and ſtrong as the ground requireth; then if any ſpring which did before feed the earth be left out of the compaſſe of the pond (becauſe it lyeth too high to be brought in) then ſhall you by drawing gutters or draines from the ſpring down to the pond, bring all the water of the ſprings into the pond and ſo continually feed it with freſh and ſweet water. Then ſtoring it with fiſh of beſt eſteem, as *Carp*, *Tench*, *Bream*, *Pearch*, and ſuch like and keeping it from weeds, filth and vermine, there is no doubt of the dayly profit

But if this mariſh and low ground, though it lye low and have many ſprings falling upon it, yet it lyeth not ſo extreame low but that there is ſome River or dry Ditches bordering upon it, which ly in a little lower deſcent, ſo that except in caſe of inun-

inundation the river and ditches are free from the moiſture of this ground, but where there is any over-flowing of waters, there this marſh ground muſt needs be drowned; in this caſe, this ground can hardly be made for Corn, becauſe every over-flow putteth the Grain in danger, yet may it be well converted to excellent paſture or meadow, by finding out the heads of the Springs, and by opening and cleanſing them, and then drawing from thoſe clenſed heads, narrow drains or furrows, through which the waters may paſſe to the neighbours ditches, and ſo be conveyed down to the low Rivers: leaving all the reſt of the ground dry, and ſuffering no moiſtures to paſſe, but what goeth through theſe ſmall deep Channels; then as ſoon as Summer commeth, and the ground begins to harden, if you ſee any of the water ſtand in any part of the ground, you ſhall forthwith mend the drain, and help the water to paſſe away; which done: (as the ground hardneth) you ſhall with hacks and ſpades lay the ſwarth ſmooth and plain, and as early in the year, as you can conveniently, you ſhall ſow upon the ground good ſtore of Hay-ſeeds, and if alſo you do manure it with the rotten ſtaddles or bottoms of hay-ſtacks, it will be much the better, and this ſtaddle you ſhall not ſpread very thick, but rather of a reaſonable thinneſſe, that it may the ſooner rot and conſume upon the ſame.

Draining of wet grounds.

But if this marſh and filthy ground do not lye ſo low as theſe low valleys, but rather againſt the tops of hills: you ſhall then, firſt open the heads of all the ſprings you can find; and by ſeverall drains or ſluces, draw all the water into one drain, and ſo carry it away into ſome neighbouring ditch and valley; and theſe drains you ſhall make of a good depth, as at leaſt two foot, or 2 foot and a half, or more, if need require, and then croſs-wiſe every way overthwart the ground, you ſhall draw more ſhallow furrows, all which ſhall fall into the former deep drains, and ſo make the ground as conſtant, and firme as may be: then having an intent to imploy it for corn, you ſhall bring your Plow into the ground, being a very ſtrong one, and not much differing in Timber-work, or Irons from that which turneth up the clay-grounds, and laying before the Plow long waddes or roules of the ſtraw of Lupins, Peaſe, or elſe Fetches, (but Lupins is,

is the beſt)you ſhall turn the furrows of the earth with the plow upon the wades, and ſo cover or bury them in the mould, and thus do unto every furrow, or at leaſt unto moſt of the furrowes you turn up, and ſo let it lye a little time to rot, as by the ſpace of a fortnight or three weeks, in which ſpace, if the ground receive not rain and moyſture enough to rot the ſtraw thus formerly buried, you ſhall then by ſtopping the draines, and making the Springs over-flow, gently waſh the ground all over and no more, & then preſently drain it again: which done, as ſoon as the earth is dry, you ſhall hack it and break it into ſmall pieces, and then you ſhall alſo ſand it, lime it, and manure it.

And laſtly you ſhall Marl it, but if no ſalt ſand be to be had, then inſtead of it you ſhall chalk it, yet of all the reſt you ſhall take the leaſt part of chalk.

This done, about the latter end of *July* you ſhall plow up the ground again with ſomewhat a better and deeper ſtitch than you did before, that if any of the ſtraw be unrotted or unconſumed; it may again be raiſed up with the new moyſt eatth, and ſo made to waſt more ſpeedily, and if at this ſecond carrying you do ſee any great hard clots to riſe, then with your hacks you ſhall break thoſe hard clots in pieces laying the Land clean without clots, weeds, or any other annoyance, and ſo let it reſt till *October* at which time you ſhall plough it over again, hack it harrow it, and then ſow it with the beſt Seed wheat; for this ſoyl thus dreſt and manured, albeit it be of all other the moſt barren, yet by reaſon of this moyſture, which at pleaſure may be put to it, or taken from it, and by the mixture of theſe comfortable ſoyles and compoſts, it is made as good and fruitfull as any earth whatſoever, and will bear Wheat abundantly for the ſpace of three yeares together, then good Barley the fourth year, with a little help of a Sheep-fold, or Sheepes manure: then Rye the fift year; Oates the ſixth, the ſeventh and eighth years; ſmall Peaſe the ninth year; good meadow or paſture three yeares following, and then to be new dreſt againe, as beforeſaid.

Harrowing. Now as ſoon as your Seed-Wheat is ſown, you ſhall then harrow the ground again, and be ſure to cover the Wheat both deep and cloſe; as for the clots which ſhall ariſe from this ſoyle, is

it ſhall not matter whether you break them or no, for by reaſon of their moyſture, they will be plyant and eaſie for the Wheat to paſſe through, ſo that you ſhall not care how rough your land lye; ſo it lye clean, and the Corn well covered, but for all other ſeeds you ſhall break the clots to duſt, and lay the land as ſmooth as may be.

Now for the weeding of this ſoyl, you will not be much trou- Weeding.
bled therewith, becauſe this ground naturally of its own accord putteth forth no weeds, more than thoſe which are ingendred by the new made fruitfulneſſe thereof, and thoſe weeds for the moſt part are a kind of ſmall ſedge or hollow reed; any of which if you ſee appear, or with them any other kind of weed, you ſhall at the firſt appearance, either pull them up by the roots with your wodden nippers, or elſe cut them cloſe by the ground with your weed-hooks.

CHAP. 10.

A generall way for the enriching of any poor arable ground, either Clay or Sand, with leſſe charge than formerly.

IF the former demonſtrations and inſtructions which I have ſhewed thee, appear neither too difficult, or too coſtly (for now I ſpeak to thee plain, ſimple, poor Husbandman) and yet thou art maſter of none but barren earth, then thou ſhalt by thine own induſtry, or the induſtry of thy Children, Servants, and ſuch like; or by contracting with Taylors, Botchers, or any poor people that will deſerve a penny, gather up, get or buy all the rags, ſhreds, old baſe pieces of woollen cloth whatſoever, which are onely caſt, and fit for nothing but the Dung-hill, and of theſe if thou canſt compaſs but a ſackfull, or a ſackfull and a half, is is ſufficient for the dreſſing of an acre of arable ground. Theſe ſhreads & rags (torn ſmall) or hackt and hewed into ſmall pieces or bits, thou ſhalt thinly ſpread over the land before fallowing time, then comming to fallow, plough them all into the ground, & be ſure to cover them, then give your land the reſt of its ardors as ſtirring, ſoyling, ridging, &c. in their due ſeaſons, and after an husbandly manner: then when you come to ſow it, you ſhall take Raggs of woollen cloath.

Steeping of ſeed corne, the ſlimie thick water which commeth from dung-hills, or for want thereof, water in which Cowdung hath been ſteeped, and therein you ſhall ſteep your ſeed corne; that is to ſay, if it be barely, you ſhall ſteep it for the ſpace of thirty ſix hours, or thereabouts; if it be Wheat, but eighteen houres; and if it be Peaſe, but twelve houres; for Rye, or Oats, not at all: and the ſeed thus ſteeped, you ſhall ſow it according to good Husbandry, and there is no doubt of wonderfull encreaſe.

Or any pulſe.

There be others which take the ſeed corne, and ſteeping it in good ſtore of Cow-dung and water, ſtirre altogether for an hour in the morning, and an houre at night, and then being ſetled, draine the water from the ſeed and the dung, and the next morning ſow the corne and the dung both together on the land, being ſure not to ſcant the Land of Seed, and no doubt the encreaſe will be wonderfull.

Now if this cannot be conveniently done, or that you want dung, if then you take ordinary water, and therein ſteep your ſeed, it is good alſo, and eſpecially for barly, and is approved by daily experience.

Shaving of Horn.

But now me thinks I heare the poore man ſay, that here is but one acre dreſt, and that is a ſmall proportion; to this I anſwer, if thou beeſt able but to dreſſe one acre with theſe woollen raggs, thou ſhalt then ſearch among the Horners, Tanners Lanthorn makers, and ſuch like, and get all the waſt ſhavings of horn which thou canſt poſſibly compaſſe, as before of the rags ſo of theſe a ſack and a halfe, or two ſacks will dreſs an acre: theſe ſhavings (which are indeed good for no other uſe) you ſhall ſcatter upon the land as you did the rags, then plow them in after the ſame manner, ſo order the ground, ſo ſow, and in the ſame manner ſteep the ſeed, and queſtionleſſe the increaſe will bee wonderfull great: theſe manures will laſt five yeares without any renewing. Now if of theſe you cannot get ſufficient to trim all your ground, you ſhall then deale with Butchers, ſowſe women, Slaughter-men, Scullions, and the like; and from theſe you ſhall get all the hoofs you can, either of Oxe, Cow, or Bull, Calfe, Sheep, Lamb, Deer, Goates, or any thing that cheweth the cud, and which indeed, if not for this uſe, are otherwiſe utterly caſt away to the dunghill, and deſpiſed: and theſe hoofes

Hoofes of cattell.

you

you ſhall cut and hew into ſmall pieces, and ſcatter thick upon your land at following time, then plow them in, as aforeſaid, and do in all points as with the other manures already recited, and ſo ſteep your ſeed, and there cannot be a greater inricher of arable ground whatſoever.

Now if all theſe will not yet compoſt your land, you ſhall then ſee what ſope aſhes you can get or buy, for of all manures there is none more excellent, for beſides it giveth an exceeding ſtrength and fatneſſe to the Land, it alſo killeth all manner of weeds, great and ſmall, as Broom, Gorſe, Whinnes and the like, and it killeth all manner of Worms, & venomous creeping things, it is excellent for Woad, and the ground renewed yearly, therewith may be ſown continually: theſe ſope aſhes muſt be laid on the Land after fallowing, and then ſtirred in; two load thereof will ſerve to dreſs an acre: when it is fit for ſeed, the ſeed muſt be ſteept as aforeſaid, and then ſown, and the increaſe will quit the charge manifold. Theſe ſope aſhes are alſo excellent good for Hemp, and Flax, being thinly ſown upon the Land, after it is plowed; and immediately before the Seed be ſown: but if you have more Land to dreſſe, then you muſt make uſe of your own ordinary manure, as is Oxe-dung, Horſe-dung, and the like, which that you may make richer and ſtronger then otherwiſe of its own nature it would be, you ſhall cauſe continually to be thrown upon it, all your powdred beef broth, and all other ſalt broths or brines, which ſhall grow or breed in your houſe, alſo all manner of ſoap ſudds, or other ſudds, and waſhiugs which ſhall proceed from the Laundery, and this will ſo ſtrengthen and enrich your manure, that every load ſhall be worth five of that which wanteth this help. There be divers other manures, which do wonderfully enrich and fatten all manner of barren grounds, as namely the hair of beaſts hides, (which for the moſt part, Tanners and Glovers do caſt away) this thinly ſpread on the Land, and plowed in, brings every year a fruitfull crop. Again, if Braken or Fern be layed a foot thick upon the earth, and then a layer of earth upon it, then another layer of braken, and a layer of earth upon it, then another layer of braken, and another layer of earth, and ſo layer upon layer, till the heap be as bigge as you intend it, and ſo left to rot all the Winter following, there cannot be a better

Of Woad.

The enriching of ordinary manure.

The hairs of beaſts hides.

Of braken.

manure for any arable ground; for you ſhall underſtand that the earth will ſo rot the braken, and the braken ſo ſoake into the earth, that they will become both one rich ſubſtance. And herein you ſhall note, that whenſoever you would have any ſubſtance (of what condition ſoever) quickly to rot and turn to manure, that the only way is to mixe it with earth, and that will in ſhort ſpace bring it to rottenneſſe. Now this braken and earth thus rotted you ſhall lay upon your land as you do your ordinary dung of Cattell, and then ſow your ſeed being ſteept as aforeſaid.

To rot dung quickly.

Next your Malt-duſt which is the ſprout, come, ſmytham, and their excrements of the Malt, as an excellent manure for arable land, allowing three quarters thereof for an acre, and ſtrowing it upon the land after it is plowed and ready to be ſown.

Of Malt-duſt.

There is another manure, which albeit it is not plentifull every where, yet in ſome places it is, and not inferior to any manure before ſpoken of, & that is your rotten Pilchards after the oyl is taken from them & the carcaſſes caſt to the dunghill, this laid on the land, & plowed in, bringeth Corne in great abundance: and no leſſe doth the carcaſſes and garbage of all kind of fiſh whatſoever, eſpecially of ſea-fiſh.

Of Rotten Pilchers and garbage.

Laſtly the blood entralls and offall of any beaſt is an excellent manure for any kind of grain, plant, or tree, but eſpecially for the Vine, for to it there is no nouriſhment of greater force or efficacie: alſo, if this blood be tempered with lime, it is exceeding comfortable for grain, and deſtroyeth worms, and other creeping things which hurt Corn, only it muſt not be applyed preſently, but ſuffered for a little time to rot, leſt the too much heat thereof might ſcorch and do hurt to the root of the Corn: this manure is to be laid on the earth when you ſow it, and ſow the ſeed and it harrowed or plowed in together, which done after the order of good workmanſhip, there is no doubt of the encreaſe.

Of bloud offals.

CHAP.

CHAP. II.

How to Enrich for Corn, any barren rough, woody ground, being newly ſtubbed up.

IF you have any barren woody ground, which is newly ſtubbed up, and that you would convert it to arable, you ſhall then take a great quantity of the underwood, or worſt bruſh wood which was cut from the ſame, and in the moſt convenient place in the field, as in the midſt, or near thereabout, you ſhall frame it into a broad hollow pile, and then cover it all over with great ſodds of earth, which done, ſet fire on it, and leave no part thereof (either wood or earth) unburnt, then take thoſe aſhes and ſpread them all over the field, ſo far forth as you mean to plough up, then with a good ſtrong plough fallow the ground as deep as you can, and ſo let it reſt till it be almoſt *May*; then take either Fern, Stubble, Straw, Heath, Furrs, Sedge, bean ſtalks or any other waſt growth, take I ſay either any one, or more of theſe or altogether, as you ſtand poſſeſt of them, and burn them to aſhes and therewith cover your land the ſecond time, and then in ſummer ſtirre it within a Month, after ſoyle it, then at the beginning of *October*, or a little before, plough it again, and ſow it with Rye the firſt crop, and you ſhall ſee the increaſe will be very plentifull, the next year you may ſow it with Wheat, the third year with Barley, the fourth year with Peaſe, Lupins, Fetches, or any other pulſe, and then begin with Wheat again; for it is credibly ſaid, that this manner of dreſſing theſe barren, woody grounds, ſhall maintain and keep the earth in good heart; and ſtrength in the worſt places, for the ſpace of four years, in that which is in any thing reaſonable for the ſpace of ſix yeares, and where there is any ſmall touch of fertility, for the ſpace of ſixteen years; of which there are dayly experiences in *France* about the forreſt of *Arden*, and ſome with us here in *England* in many woody places.

Wood aſhes.

Aſhes of Fern, Straw, &c.

CHAP.

CHAP. XII.

The manner of reducing and bringing into their first perfection all ſorts of ground, which have been over-flowed, or ſpoiled by ſalt water, or the Sea breach, either arable or paſture, as alſo the enriching, or bettering of the ſame.

The difficulty of this labour.

THere is nothing more hard or difficult in all the art of husbandry, then this point of which I am now to intreat, as namely, the reducing and bringing unto their first perfection all ſotts of grounds, which have been over-flowed, or elſe ſpoiled by the Sea breach, and bringing in of too great abundance of ſalt-water, which to ſome men of little experience, and free from thoſe dangerous troubles, may appear a mattet very ſleight, and the wound moſt eaſie and curable; and the rather, becauſe in all my former relations and demonſtrations, touching the bettering of every ſeverall ſort of ground, I do apply, as one of my chiefeſt ingredients or ſimples, by which to cure barrenneſſe, Salt-ſand, ſalt-weeds, ſalt-water, ſalt-brine, Aſhes, Lime, Chalk, and many other things of ſalt nature, as indeed all the manures and marles whatſoever, muſt either have a ſalt quality in them, or they cannot produce fruitfulneſſe, ſo that to argue ſimply from naturall reaſon; If ſalt be the occaſion of fruitfulneſſe and increaſe, then there cannot be much hurt done by theſe over-flowes of the ſalt-water, that it ſhould rather adde a fattening and enriching to the ground, then any way to impoveriſh it, and make it incapable of growth or burthen. But experience, (which is the beſt Miſtreſs) ſhews us the contrary, and there is nothing more noiſome and peſtilent to the earth, then the ſuper-abundance, and too great exceſſe of ſaltneſſe; for according to our old Proverb, of *omne nimium*, that too much of every thing is vitious, as we ſee in the ſtate of man's body, that your ſtrongeſt poyſons, as *Antimony* or *Stibium*, *Coloquintida*, *Ruberb*, and the like, taken in a moderate meaſure, are moſt healthfull, and expell thoſe malignant qualities which offend the body, and occaſion ſickneſſe; but taken in the leſt exceſſe that can be deviſed, they then (out of their vitious and naughty qualities) do ſuddenly and violently deſtroy all health, and bring upon the body

The vertues of Salt.

The vices which come from Salt.

body inevitable death, and mortality; ſo is it with this matter of ſalt, and the body of the earth; for as by the moderate diſtributing thereof, it correcteth all barren qualities, diſperſeth cold, and naughty vapours; and yieldeth a kind of fatneſſe and fruitfulneſſe, whereby the Seed is made more apt to ſprout, and the ground more ſtrong or able to cheriſh the ſame, till it come to perfection, through the ſharp, warm, and diſperſing quality thereof; ſo being beſtowed in too great abundance and exceſſe, whereby the earth is ſurfeited, and as it were overcome, and drowned up with too much of this naturall goodneſſe, and helpfull quality, then all his proper vertues turn to egregious vices, as his wholeſome ſharpneſſe to a fretting, gnawing, and deſtroying gredineſſe, his comfortable warmneſſe to a conſuming and waſting fierineſs, and his gentleneſſe in diſperſing to an infectious and venemous pollution, by the joynt qualities of all which together, the ground is made neither fit to receive any thing from the hand of the Husbandman, nor yet to produce or bring forth any of it ſelf, becauſe every good quality is abuſed or expelled, and nothing but unnaturallneſſe, and ſterility left, which like a Serpent lodgeth in the ground, and will ſuffer no good thing to have ſociety with it: and theſe are the effects and miſchiefs which are occaſioned by theſe Sea-breaches, or inundations of the ſalt water.

The abuſe of ſalt in exceſſe.

It is certain, that although in the ſalt marſhes, where the Sea commeth in at certain times, and onely waſheth or ſprinkleth the ground all over, and ſo departeth, there is neither want of graſſe, nor yet complaint of any evill quality in the graſſe: yet it is moſt certain, that no overflow of ſalt water, how little or moderate ſoever, can be truly ſaid to be wholſome for any kind of graſs ground whatſoever; for graſs is compounded, of an infinite world of plants and ſimples, and moſt of them of ſeverall natures and qualities, ſo that if it give nouriſhment to one, yet it may deſtroy tenne; neither do I find it by any of the Ancients, ſimply and properly applied unto the graſs-grounds, but firſt unto the arable, in which having ſpent its primary, or firſt ſtrength upon the ſeed, (which is a great and greedy devourer, or eater up of the ſtrength, and fatneſſe of the earth) it then prepares, and makes the ground more able and fit to bring

Of ſalt moderately uſed.

No overflow of ſalt water good for graſs.

The grounds of the ſalt Marſhes.

forth graſſe and that of the beſt and fineſt kind: for although the Maſters of the Salt-marſhes find a ſingular and rare propher in thoſe grounds for the feeding, breeding, fatting, and ſuſtaining of their great Flocks of Sheep; which upon theſe ſalt grounds, they ſay will never rot or periſh by that univerſall diſeaſe, yet muſt they not impute it to the great quantity, goodneſſe or any growth in the graſſe, but to the ſalt which they lick up in the graſſe, and to the ſalt quality of the graſſe, which is not onely an Antidote or preſervative againſt that noyſome and peſtilent mortality, but alſo a delightfull and pleaſant food wherein thoſe Cattell take more contentment then in any other thing whatſoever; ſo that I muſt neceſſarily reſt upon this concluſion, that as but moderate waſhing and overflowing of Salt-waters are no certaine or particular great helps unto graſſe-grounds, eſpecially if they be applyed thereunto, and to that purpoſe ſimply at the firſt, without any other preparative or working by a former meanes, as by tillage, digging, delving, or the like; ſo the exceeding great inundation or Sea breaches which lye long ſoaking and ſinking into the earth muſt needs bee a certain infallible, and almſt incurable cauſe of barrenneſſe eating, ſpoyling, and conſuming the very rootes of all manner of plants, treets, and growths, by which the ground is made utterly inbapeable of generation or bringing forth: and therefore where theſe great inundations or over-flowings cannot be either prevented or avoyded, but as the ſeaſons of the yeare they doe and muſt hold their courſes, there I would not wiſh any man to beſtow either his labour or his coſt, for it is loſſe of time and loſſe of ſubſtance: but where it is to be prevented or avoided by induſtry, or that thoſe over-flowing or Sea-breaches come and happen by caſualty or change, as either by the unnaturalneſſe and ſuperabundance of tydes being driven in by the violence and impretuouſneſſe of outragious winds, or by any neglect or breach in the Sea-wall, or other miſhaps of the like nature, which hapneth ſometimes ſcarce once in an age, at the moſt not above once or twice in many yeares; in theſe caſes there is moſt certaine remedy, and the ground ſo ſpoyled and waſted may by art and induſtry be againe reduced and brought to the former perfection and goodneſſe; nay, many times amended and

A true cauſe of barrenneſſe.

Where this annoyance is incurable.

Where it is curable.

freed

freed from many faults and ſterile qualities, to which it was either naturally addicted, or elſe by chance and accident grew thereunto, by continuall wearing and imployment without reſt or refreſhing, by the artificiall meanes of wholſome manures, or other ſtrengthenings which ought to be applyed before thoſe faults grow in extreamities.

Now touching the cure of theſe grounds which are thus worn out, decayed, and made barren by theſe inundations of Salt-water, the owner thereof is firſt to draw into his conſideration, that as the malignity and evill quality of the earth is grown by two much fretting gnawing and waſting of the Salt, ſo it muſt be allayed and qualified by a quite contrary condition, which is freſhneſſe: the contrary then to ſalt water, muſt of neceſſity be freſh water, ſo that you are to caſt about your judgement, and by the view, ſituation, and levell of the ground (which for the moſt part can have but little difficultie in it, becauſe theſe grounds upon which the Sea thus breaketh, muſt ever be the loweſt of all other, ſo that a true deſcent comming unto it and a true aſcent comming from it, there is no hardneſſe to convey any water courſe thereunto) look how to bring a freſhneſſe which may conquer and overcome this fatneſſe, and that muſt therefore be freſh water, which by channels, ditches, furrowes, ſluces, and the like you may bring from any freſh river, ſpring, pond, or other freſh watercourſe (though removed ſome diſtance of miles from the place to which you would convey it) to the very place to which you deſire to have it, and with this freſh water you ſhall waſh and gently drowne over ſo much of your ſpoyled ground as you ſhall be able reaſonably to deale withall, in other coſts and labour for that yeare; and if you have plentifull ſtore of freſh water, then having (as I ſaid) drowned it over gently, about foure inches, or halfe a foot deepe, you ſhall ſo let it lie two or three dayes, then draine away that water by the help of back ditches, or by ſluces made for that purpoſe, which if the ſituation of the ground deny you, and that there is no ſuch convenient conveyance, then you ſhall in the loweſt part of the ground (either joyning upon ſome other ſpoyled ground, or upon the Sea-wall or bank) place a Coy, which may either caſt the water into the other ground, or elſe over the wall

The manner of the cure.

One Contrary helps another.

The watering with freſh water.

How to draine away the freſh water.

How oft to drowne the earth.

and bank into the ſea; and having thus drained away the firſt water, you ſhall then open your ſluces of freſh water again, and drown your ground over the ſecond time, and do in all things as you did before, and thus according to the plentifullneſſe of your freſh water, you ſhall drown your ground, or at leaſt waſh it over with freſh water twice a week, before the beginning of the ſpring, and if the ſalt water have lain long, or be but new departed, then you ſhall uſe your freſh water, for ſome part of the Spring alſo.

Helps if freſh water be wanting.

Now ſome may object unto me here, (and it is a matter altogether unlikely) that in ſome of theſe places, where theſe Inundations and breaches are, it is impoſſible either to find freſh water, and to bring freſh water unto them, becauſe all the ſprings for many miles about, being made naturally brackiſh, and the rivers by the infection of the ſalt tides, having loſt the greateſt part of their ſweet freſhneſſe; the queſtion now reſteth, whether theſe brackiſh waters are wholeſome for this purpoſe, or no? To this I muſt needs anſwer, that they cannot in any wiſe be good for theſe ſpoiled grounds, becauſe the earth naturally is of an attractive and drawing condition, ſucking and gathering unto it ſelf any thing that is of a ſharp ſweet, or ſower taſt, and eſpecially ſaltneſſe, ſo that being covered with thoſe brackiſh waters, it will draw from them onely their ſalt, (of which it hath too much already) and no part of the freſhneſſe which ſhould qualifie and amend it: therefore, if either your ground be thus ſituated, or your neceſſities thus unſupplied, it is better, that you rather forbear this labour of waſhing or drowning your earth, (though it be the firſt, the ſpeedieſt and ſureſt cure of all other) than by watering it with infinite and unwholeſome waters, rather encreaſe the miſchief, than any way delay it.

Whether brackiſh water be wholſome.

The firſt time of plowing, & the obſervations therein.

How to mixe earthe.

After you have watered your ground, (if it be a work poſſible to be attained unto) or otherwiſe neglected, (it being a thing not poſſible to be found) you ſhall then about the latter end of *March*, plow up all the ground with a good deep ſtitch, turning up a large furrow, and laying it into lands, raiſe them up as much as you can, and make them round, then look

of

of what nature or temper the earth is, as whether it be fine ſand, rough gravell, ſtiffe clay, a or mixt earth, or any of theſe contraries together; If it be a find ſand, either white, red, or brown, it matters not whether, then you ſhall take any clay earth which is free from theſe ſalt waſhings, being of a meane or ſmall ſtiffeneſſe, and likewiſe of as meane and little richneſs, which being digged out of ſome banck, pit, or other place where leaſt loſſe is to be had, you ſhall carry it in tumbrels or carriages to the new plowed ground, and there firſt lay it in heapes as you doe manure, then after ſpread it all over the Land, and being dry, with clottingbeetles breake it as ſmall as you can poſſibly, for this hungry Clay being of no rich and fat condition, will ſo ſuck and draw the ſalt into it, that it will take away much of the evill quality, and mixing his tough quality with the looſe condition of the ſand, they will both together become apt for fruitfulneſs and generation.

If the ſoyled ground be a rough hard gravelly earth, then you ſhall mixe or ſpread upon it the beſt and richeſt freſh Clay you can get, or if there be any ſuch fruitfulneſſe neare about you, then with a good blew Marle, for that is the cooleſt and the freſheſt, and will the ſooneſt draw out the ſalt from the gravell, and give it a new nouriſhment, whereby any ſeed ſhall be fed and comforted which is caſt into it. The mixture for Gravell.

If the ſpoyled earth be of its owne nature a ſtiffe and tough Clay, which is but ſeldome found ſo neere the Sea ſhore, then after the plowing you ſhall mix it, and cover it over with the freſheſt and fineſt Sand that you can poſſibly get, for that will not only ſeperate the Salt from the Clay, and take away the naturall toughneſs and ſtiffereſs of the ſame, which hindereth and ſuffocateth the tender ſprouts, ſo as they cannot eaſily get out of the earth, but alſo by lending a gentle warmth, will aſſwage the cold quality of the clay, and make it bring forth moſt abundantly. The mixture of Clay.

Laſtly, if the ſame ſpoyled earth be of a mixed quality, then you ſhall look whether it be binding or looſening. If it bee binding, then you ſhall mixe or cover it with fine freſh ſand; if looſening, then with a reaſonable rich and tough clay, for ſo you ſhall bring it to an open and comfortable temper, making The mixture of mixt earth.

it able both to receive cheriſh and bring forth the ſeed; which before either too much wet, or too much dryneſſe did ſtifle and bind up within the clots and mould, ſo as it had no ſtrength to bear it ſelf through the ſame.

The ſecond plowing.

When you have covered your lands with this mixture, you ſhall then plow it over againe before Midſummer, turning the new laid earth unto the old earth, and as ſoon as that labour is finiſhed, you ſhall then lade forth your manure or compoſt unto it, in which you are to have a great care what manure you

Election of manures.

elect for that purpoſe, for it is not the richeſt and fatteſt manure as your Pigeons dung, or Pullets dung, Lime, Chalk or aſhes, your Horſe-dung, your ſhovelings upon high waies, your beaſts hooſes, your horne ſhavings, your Hemp weed, or any other weed which groweth neare the ſeydge of the ſea, neither your Oxe, or Cow dung, though of all before named, that is the beſt, which doth the moſt good upon theſe ſpoyled grounds, becauſe they have all in them a ſtrong quality of ſaltneſſe or ſharpneſſe, which will rather adde then diminiſh the evill quality of the earth, but in ſtead of theſe you ſhall take the mud of dryed bottomes of

The beſt manures.

Lakes, Ponds, and Ditches of freſh water, and the moyſture or wetter ſuch mud or bottoms are, the better it is, or ſtraw which is rotted by ſome freſh water courſe, raine, or the like: by no meanes that which is rotted by the urine or ſtale of horſe or cattle for that is the ſalteſt of all other; or you may take any weeds which you ſee grow in freſh Rivers, Ditches, Ponds, or Lakes, eſpecially thoſe which grow at the bottoms of Willow, Sallow, or Oſier trees, or you may take the old ragges of wollen cloth, or any other manure which you know to be the wool-

The ordering of the manure.

leſt or freſheſt, and with any of theſe, or all of thoſe together you ſhall very plentifully cover your ground all over, and immediately upon the covering or laying on, ſee you preſently plow it, land after land; for to give it any long reſpit after it is ſpread, the Sun out of his attractive and ſtrong naturall will

The third plowing.

exhale and draw out all the vertue from your manure, and ſo ſpoyl much of your labour.

When you have thus manured it, and plowed it, you may then let it reſt till Michaelmas, at which time you may plow it the laſt time, and then ſow it with the ſtrongeſt and hardeſt

Wheat

wheat you have, of which the white Pollard is the beſt & there is no queſtion but if it be ſafe from a ſecond inundation, your crop will both be plentifull & rich, and alſo acquit and pay largely for all your former charges. The ſecond yeare you need but onely plow it as aforeſaid, and then ſow it with good Hemp-ſeede, and be aſſured you will have a brave crop ariſe thereof, then the third yeare you ſhall plow it as flat as you can, ſtill throwing it down and not raiſing it up at all, and then ſow it with the beſt Oates you can get, according to the nature and ſtrength of your Country, and be ſure to harrow it well, and to breake every clot, and make the mould as fine as is poſſible, and the next yeare after your Oates, lay it for graſſe, and I dare be bold, it will beare reaſonable meadow; yet would I not have you this year to preſerve it for that purpoſe, but rather to graze it with Sheep or Cattell, eſpecially Sheepe, of which I would have you lay on good ſtore; for it matters not how neere or cloſe to the ground they eat it; for the next yeare it will become to the fulneſſe of perfection, and be as profitable or more profitable ground than ever it was, and then you may apply or accomodate it for what uſe they pleaſe, either arable, Meadow, or for continuall grazing.

The ſecond yeare ſowing and third.

Laying the earth for graſſe.

And thus much touching the manner of reducing againe, and bringing unto their firſt perfection, all ſorts of grounds which have been over-flowed or ſpoyled by Salt-water, or the Sea-breaches, whether it be arable or paſture; as alſo the enriching or bettering of the ſame.

Of grazing.

CHAP. XIII.

Another way to enrich barren Paſtures, or Meadows, without the help of water.

IF your barren Paſtures or Meadows be ſo ſeated, that there is no poſſible means of waſhing or drowning them with water, you are then only to reſtore and ſtrengthen them by the efficacy of manure or ſoyl, without any other help, and this may diverſe wayes be done, as by thoſe manner of manurings, which I have formerly treated of. But to go a better, and briefer way to work, and more for the eaſe and capacity of the plain Husbandman,

bandman, whenſoever you ſhall be poſſeſt of theſe barren paſtures, if the barrenneſſe proceed from ſand, or gravell, then ſome Husbands uſe to manure the paſture over with the beſt clay they can get, firſt laying it in heaps, then ſpreading it, and laſtly, with clotting beetles breaking it into as fine duſt as they can get it, and this labour, they commonly perform as ſoon as they can after Harveſt, when the latter ſpring is eaten, and the earth is moſt bare; but if the barrenneſs proceed from an hungry, cold, and dry clay, then the manure is with the beſt mooriſh black earth which they can get, or with any moiſt manure whatſoever, eſpecially, and above the reſt, when the ſoyle that is digged out of old ditches, ponds, or dried up ſtanding lakes, and this earth muſt be laid plentifully upon the ground in manure heaps, as aforeſaid, that is to ſay; firſt in great heaps, then after broken and diſperſed over the whole ground, and laſtly, broken into ſmall duſt, and mixed with the ſwarth of the ground, and this labour, as the other generally performed after the Harveſt, as a time of moſt convenience, and giving the earth a fit reſpite to ſuck in the ſtrength and comfort of the new earth, and alſo having all the Winter after with his froſts, ſnowes, and ſhowers, to mellow, ripen, and mixe together one earth with the other: and doubtleſs this is a moſt exceeding good Husbandry, and not to be refeld or carpt againſt by any knowing or ſound judgement; onely it is not the moſt abſolute, or beſt of all waies whatſoever, but that others may be found ſomewhat more near, and ſomewhat more commodious.

Clay manure.

Mooriſh earth

The beſt way to enrich paſture or meadow.

Therefore, whenſoever you ſhall be owner of any of theſe barren paſtures, or meadows, of what nature or conditlon ſoever the earth be, whether proceeding from gravell, ſand, clay, or peſtered with any other malignant quality whatſoever, to reduce it to fertility and goodneſſe in the ſhorteſt time, and to the moſt profit, about the Month of *March*, when all paſture grounds are at the bareſt, and do as it were remain at a ſtand between decreaſing and increaſing, you ſhall begin then to lead forth your manure for the refreſhing of theſe Earths, and the manure which you ſhall carry unto theſe grounds, ſhall be the ſoyl of ſtreets within Cities or Towns, or the parings and gatherings up of the high-wayes, much beaten with travell, alſo the earth for

The ſoyle of the ſtreets or high-waies.

for two or three foot deepe, which lyeth under your dung-hill when the dung is removed, and carried away, for this is most precious and rich mould, and is not alone excellent for this use, but also for the use of Gardens, for the strengthing and comforting of all sorts of tender plants, and for the use of Orchards, for the comforting both of old and young Trees, when at any time their Roots are bared, or otherwise when there groweth any misslike or decreasing. Earth under Dung hills. To enrich Gardens or Orchards.

You shall also take the fine earth or mould which is found in the hollow of old Willow-trees, rising from the root up almost to the middle of the Tree; at least so far as the tree is hollow, for than this there is no earth or mould finer or richer. The mould of Willow in Tree.

Of all these manures, or of any one of them, or of as many as you can conveniently get, you shall lead forth so much as may very plentifully manure & cover your ground all over; you shall first lay it on the earth in reasonable big heaps that the Sun may not exhale the goodnesse out of it, and then at your best leisure, & so soon as you can conveniently you shall spread it Universally over the field, dispersing it as equally as you can, unlesse your field be more barren in one place than in another, which if it be, then you shall lay the greatest plenty where it is most barren, and the lesse where you find the greatest fertility; yet by all means see you scant not any place, but give every one his due; for to do otherwise would shew much ill husbandry.

Now it is the use of some Husbandmen, that what mould or earth is laid out from six a clock in the morning till three of the clock in the afternoon, that they make their Hinds spread in the evening before they go to supper; and questionlesse it is a very good course, and worthy to be imitated of every good Husband.

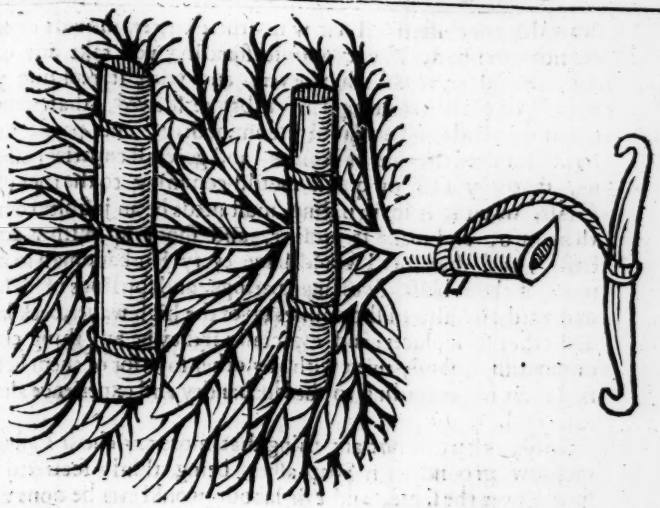
After you have laid forth your mould, and spread it all over your pasture or meadow, then you shall make some boyes, girles or other people, to pick and gather up all the stones, sticks, or other unnecessary matter which might happen to be led forth with the mould, and to pick and lay the pasture so clean as is possible, which done it is to be intended that yet not withstanding this ground will lye exceeding rough, both in respect of the clots of earth, which will not easily be broken, as also in respect

ſpect of naturall roughneſs of theſe rich moulds which at this time being digged up in the wett will not eaſily be ſeperated or diſſolved, and therefore when you have finiſhed the labours beforeſaid, you ſhall let the clots reſt till the Sun and weather have dryed them, then after a ground-ſhowre (obſerving to take the firſt that falleth) you ſhall harrow your ground over, after this manner.

A new way of Harrowing.

You ſhall cut down a pretty big white thorne-tree, which we call the Hauthorn-tree, and make ſure that it be wonderfull thick buſhie and rough grown; which done, you ſhall plaſh it as flat as you can, and ſpread it as broad as you can, and thoſe branches or boughes which of neceſſity you muſt cut in ſunder, you ſhall againe plaſh and thruſt into the body of the Tree, binding them with cords or wichs ſo faſt thereto, that they may by no meanes ſcatter or ſhake out, and if any place appeare hallow or thin and cannot come to lie hard, firme, and rough upon the ground, then you ſhall take other rough buſhes and thruſt into the hollow places, and bind them from ſtirring alſo, till you have made your plaſh full and equall in all places, and that all the roughneſs may be as in a flat levell equally touch the ground: when you have thus proportioned your Harrow, you ſhall then take great loggs of wood or pieces of timber: and with ropes bind them on the upper ſide of this rough Harrow, that the poiſe or weight of them may keepe the rough ſide hard, and firme to the earth, and then the Harrow will carry this proportion or figure.

To



To the big end of his horrow, you ſhall fixe a ſtrong rope with a Swingle-tree with Treats, Coller, and Harneſſe, and one Horſe is fully ſufficient to draw it round about the Paſture or Meadow: ſo with this Horrow you ſhall harrow the ground all over, and it will not onely breake all the hard clots to a very fine duſt, but alſo diſperſe them and drive them into the ground, and give ſuch a comfort to the tender roots of the young graſſe, then newly ſpringing, that it will double and treble the increaſe. And for mine own part, this experience I my ſelfe have ſeene upon an extreame barren Paſture ground in Middleſex, where none of theſe good moulds or ſoyles could be got; but this Husbandman was faine to take all the rubbiſh & coorſe earth even to the very ſweepings of his yard, and for want of enough thereof, to take any ordinary earth he could get, and with it hee dreſt the ground in ſuch ſort as I have now laſt ſhewed you, and this being done in Aprill, he had in June following as good Meadow as could bee wiſht for, and was the firſt Meadow I ſaw cut downe in all that Country: from whence I

Of Rubbiſh and ſweepings.

draw this concluſion. That where theſe better moulds or ſoyls are not to be had, if yet notwithſtanding you take any ordinary mould or earth whatſoever, and with it repleniſh your Paſture or Meadow ground as is before ſhewed, that without doubt you ſhall find an infinite commodity, and profit thereby; for even the rule of Reaſon, and generall experience ſhewes us, that any freſh or quick mould comming to the root of the Graſs, when it is in ſpringing, muſt needs be an infinite comfort thereunto, and make it proſper, and ſhoot up with a double haſte; and therefore I would have every Husbandman to make much of the rubbiſh, ſweepings, parings, and ſpitlings of his houſe and yard, and alſo of ſhovellings up of the high wayes, back lanes, and other ſuch places; and eſpecially if they be any thing clayie, or mooriſh, or ſandy mixt with any other ſoyl; for of them he ſhall find great uſe, according to the Husbandry and experience already deſcribed.

Of Soape-Aſhes.

Laſtly, there is not any thing that more enricheth Paſture or meadow ground then Soap-aſhes, being thinly ſcattered and ſpread over the ſame, and this labour would ever be done at the latter end of *April*, for then Graſs is beginning to ſhoot up, and at that time finding a comfort, the increaſe will multiply exceedingly.

CHAP. 14.

How to enrich and make the moſt barren ſoyl to bear excellent good Paſture or Meadow.

Two wayes to enrich earth.

TO ſpeak then of the bettering and enriching of theſe barren earths, and reducing them to good Paſture or Meadow, it is to be underſtood, that there are but two certain wayes to compaſs and effect the ſame, namely water or manure.

You are then when you go about this profitable labour to conſider the ſituation of the earth you would convert to Paſture and to elect for this purpoſe, the beſt of this worſt earth you can find, and that which lyes loweſt, or elſe that which is ſo deſcending, as that the bottome thereof may ſtretch to the loweſt part of the continent, for the lower that ſuch grounds lye, the ſooner they are made good, and brought to profit: Next you ſhall conſider

ſider what burthen of graſs it beares, and whether the graſſe be clean and intire of it ſelfe (which is the beſt and likeliett ſoyl to be made fruitfull) or elſe mixt with other worſer growths, as Thiſtle, Heath, Broom, or ſuch like, and if it be burthened with any of theſe naughty weeds, you ſhall firſt deſtroy them by ſtubbing them up by the roots, and by burning the upper ſwarth of the earth with dry ſtraw mixt with the Weeds which you ſhall cut from the ſame, then it ſhall be good for certain nights both before the firſt and latter ſpring to fold your ſheep upon this ground, and that not in a ſcant manner, but very plentifull ſo as the dung of them may cover over all the earth, and their feet trampling upon the ground, may not only beat in the dung, but alſo beat off all the ſwarth from the earth, that where the Fold goeth, there little or no graſſe may bee perceived, then whileſt the ground is ſoft and thus trampled, you ſhall ſow it all over with Hay-ſeeds, and then with your flat board beetles, beat the ground ſmooth and plain, which done, you ſhall then ſtrow, or thinly cover the ground with the rotten ſtadds of Hayſtacks, and the moyſt bottomes of Hay-barnes, and, over that, you ſhall ſpread other ſtrong manure, of which Houſe-dung, or Horſe-dung, and mans ordure mixt together is the beſt, or for want of ſuch, either the manure of Oxen, Kine, or other beaſts; and this manure alſo you ſhall ſpread very thin upon the ground, and ſo let it lye till the Graſſe come up through the ſame, which Graſs you ſhall by no meanes graze or feed with your Cattell, but being come to the perfectneſſe of growth, you ſhall mow it down; and although it will be the firſt year but ſhort and very coorſe, yet it skilleth not; for the enſuing years ſhall it yeeld profit, and bring forth both ſo good graſſe, and ſuch plenty thereof as reaſonably you can require; for this is but the firſt making of your ground, and alteration of the nature thereof: neither ſhall you thus dreſs your ground every year, but once in twenty or forty yeares, having plenty of water to relieve it. When therefore you have thus at firſt onely prepared your ground by deſtroying the barren growth thereof, and by manuring, ſowing and dreſſing it, you ſhall then carefully ſearch about the higheſt parts of the ground, and the higheſt parts of all other grounds, any way neighbouring round

Of watering Grounds.

about it, and ſomewhat above the level thereof, to ſee if you can find any Springs in the ſame (as doubtleſſe you cannot chuſe but do, except the ground be of more then ſtrange nature;) and the heads of all ſuch ſprings as you ſhall find, you ſhall by gutters and channels draw into thoſe ditches which ſhall compaſſe your meadow round about, obſerving either to bring the water into that part of the medow ditch which ever lyeth higheſt, and ſo let it have a currant paſſage through the ditches downe to the lower part thereof, and ſo into ſome Lake, Brook, or other channell, and in this ſort you may bring your water a mile or two: Nay I have ſeen water brought for this purpoſe, three or foure miles, and the gaine thereof hath quit the charge in very plentifull manner.

Helps in the Watering.

But if you cannot find any Spring at all, nor can have the helpe of any Lake, Brook, River, or other channell of moving water, (which is a doubt too curious, as being caſt beyound the Moon) you ſhall then not onely caſt ditches abont this your Meadow ground, but alſo about all other grounds, which ſhall lye about and that in ſuch ſort, that they all may have no paſſage but into the upper part of the meadow ditch, ſo that what raine ſoever ſhall fall from the Skie upon thoſe earths, it ſhall be received into thoſe ditches, and by them conveyed into the meddow ditch: and to augment the ſtore of this water, you ſhall alſo in ſundry parts of thoſe upper ground which are above the meadow, in places moſt convenient, dig large Ponds or Pits, which both of themſelves may breed and alſo receive all ſuch water as ſhall fall neere about them, and thoſe Ponds or Pits being filled (as in the winter time neceſſarily they muſt needs be at every glut of raine) you ſhall preſently by ſmall draines, made for that purpoſe, let the water out from them into the ditches and ſo into the meadow ditch and ſo ſtopping all the draines againe, make the Ponds or Pites capeable to receive more water.

When and how to water.

When you have thus made your ground rich with water, and that you ſee it flow (as in the wintertime neceſſarily it muſt) in plentifull manner through all your ditches, you ſhall then twice or thrice in the yeare, or oftner, as you ſhall then think meet in the moſt convenienteſt places of the meadow ditch

ſto

ſtop the ſame, and make the water to riſe above his bounds, and to over-flow and cover your meadow ground all over, and if it be a flat levell ground, if you let the water thus covering it to lye upon the ſame the ſpace of four or five dayes, or a weeke, it ſhall not be amiſſe; and then you may water it the ſeldomer. But if it lye againſt the ſide of a hill, ſo that the water cannot reſt upon the ſame, then you ſhall waſh it all over, leaving no part unmoyſtened; and this you ſhall doe the oftner, according as the water ſhall fall out, and your water grow more or leſſe plentifull.

The beſt ſeaſon for watering.

Now for the beſt ſeaſon or time of the year for this watering of meadows you ſhall underſtand, that from Alhallowtide, which is the beginning of November (& at which time all after-growth of meadowes are fully eaten, and cattle for the moſt part are taken up into the houſe) untill the end of Aprill (at the which time graſſe beginneth to ſpring and ariſe from the ground) you may water all your meadows at your pleaſure without danger, if you have water enough at your pleaſure, and may ſpend or ſpare at your will; yet to do in the beſt perfection, and whereby your ground may receive the greateſt benefit; you ſhall underſtand, that the onely time for the watering of your meadows is immediately after any great Fluxe of raine, falling in the Winter, any time before May, when the water is moſt muddy, foule, and troubled, for then it carrieth with it a ſoyle or compoſt which being left upon the ground, wonderfully enricheth it and makes it fruitfull beyond expectation, as daily is ſeen in thoſe hard Countries where almoſt no graſſe grows but by this induſtry: and here you muſt obſerve, that as you thus water one ground, ſo you may water many, having ever reſpect to begin with the higheſt, and ſo let the water paſs out of one ground into another untill it come to the loweſt, which commonly is ever the moſt flat and levell, & there you may let the water remaine ſo long as you think good (as was before ſhewed) and then let it out into other waſt ditches or rivers. And here your ſhall know, that this loweſt ground will ever be the moſt fruitfull, as well becauſe it lyeth the warmeſt moyſteſt and ſafeſt from ſtormes and tempeſts, and alſo becauſe what ſoyle or other goodneſs this over-flow of water, or the raine waſheth from other grounds, it leaveth

leaveth upon this, and ſo dayly encreaſeth the fertility, from whence you ſhall gather, that at the firſt making of theſe meadow grounds, you may beſtow leſſe coſt of manure and other charges upon this loweſt, flat, levell ground, than on the higher: and ſo by that rule alſo obſerve to beſtow on the higheſt ground, and the higheſt part of the higheſt ground ever the greateſt abundance of manure, and ſo as you ſhall deſcend lower and lower to lay your manure thinner and thinner, yet not any part utterly unfurniſhed and void of compoſt: yet as before I ſaid you are to remember that theſe meadow grounds need not thus much uſe of manure (having this benefit of water, and the firſt yeares dreſſing as was ſhewed in the beginning of this Chapter) above once in twenty years; nay, it may be, not above once in a mans lifetime.

And here alſo is to be conſidered that the water which commeth from Clay or Marl grounds, being thick muddy and puddly, is much better and richer than that which commeth from ſand, gravell, or pibble, and ſo runneth clear and ſmooth, for that rather doth waſh away and conſume the goodneſſe of the ground, than any way adde ſtrength thereunto.

CHAP. 15.

Of the inriching and dreſſing of Barren grounds, for the uſe of Hemp or Flax.

Grounds ill for Hemp or Flax.

YOu ſhall underſtand there are two ſorts of grounds which out of their own natures utterly refuſe to beare Hemp or Flax; that is, the rich ſtiff black Clay, of tough ſolid and faſt mould, whoſe extream fertility and fatneſſe giveth ſuch a ſurcharge to the increaſe of the ſeed, that either with the rankneſſe it runneth all into Bun and no rind; or elſe the ſeed being tender, and the mould ſad and heavy, it burieth it, ſo deep therein, that it can by no meanes get out of the ſame: the other is the moſt vild and extream barren ground, which by reaſon of the climat wherein it lyes, is ſo exceeding ſterile and unfruitfull, that it will neither bear theſe ſeeds, nor any other good ſeed; and of theſe two ſoyls only I purpoſe in this place to treat; for which ſuch ſoyls as will naturally and commodiouſly beare theſe ſeeds, I have nothing to do, in that I have ſufficiently

ficiently written of them in mine *English Husbandman* and *English Housewife*, which are books onely for good grounds; but this for all such grounds as are utterly held without cure.

To begin then with the stiff black Clay, which albeit it be very rich for Corne, is most poor for these seeds, when you would reduce and bring it to bear Hemp or Flax, which neere unto the Sea-coast is of greater price and commodity than Corn any way can be, especially adjoyning unto any place of fishing, in respect of Nets and other Engines which is to be made of the same, and which being dayly wasted and consumed, must likewise be dayly repleniſhed: you must first with a strong plough, fit for the nature of such land, plow up so much ground as you intend to sow Hemp or Flaxe upon, about the midst of *May*, if the weather be seasonable, and the ground not too hard: if otherwise, you must stay till a showre do fall, and that the earth be moistned, then shall you hack it and break the clots in small peeces, then with the salt Sea-sand, you shall sand it very plentifully, but if that be not to be gotten, and that you be very well assured of the naturall richnesse of the earth, you shall then sand it with the best red sand you can get or find neer unto you, and upon every Acre of ground you thus sand with fresh sand, you shall sow three bushels of Bay salt, and then plow up again the earth, sand and salt together, which would be done about the latter end of the year, as after *Michaelmas*, and so let the ground rest till seed time, at which time you shall first before you plough it, go down to the low rocks on which the Sea-beats, and from thence with drags and other Engines, gather those broad leaved black weeds, which are called Orewood, and grow in great tufts, and abundance about the shoare; and these weeds you shall bring to your Hemp-land, and cover it all over with the same, and then you shall plow it again, burying the weeds within the earth. Black Clay for Hemp, &c.

And herein is to be observed that in any wise you must lay these weeds as wet upon the Land as when you bring them out of the Sea, provided still, that you adde no other wet unto them but the salt water, for so they are of all soyls and manures whatsoever the only best and fruitfullest, and most especiall for these seeds, and breed an increase beyond expectation.

When you have thus plowed over the ground, you ſhall then hack it againe, and then ſow it with either Hemp or Flaxe-ſeed, which you pleaſe, and after it is ſo ſown, you ſha'll then harrow it (and not before) and you ſhall be carefull to harrow it into as fine mould as you can, and this mould is likely to runne fine enough, as well by reaſon of the fertility, as alſo of the mixture; yet what clots you cannot break with your Harrows, thoſe you ſhall break with your clotting-beetle, and ſuch like tools; then after the firſt great ſhowre which ſhall fall after your ſowing, you ſhall runne over your land thus ſowne with your back Harrows, that is, with a paire of large Harrowes, the wrong ſide turned upward, to wit, the teeth turned from the earth, and the back towards the earth; and if need be, you ſhall lay upon the Harrowes ſome indifferent heavy piece of wood, which may keep the back of the Harrows cloſer to the ground, and ſo go over all the earth, and lay it as ſmooth and light as is poſſible, without leaving the ſmalleſt clot that may be, unbroken. Now if the ground be ſown with Hempe, you ſhall not think of weeding it at all, becauſe Hemp is ſo ſwift a grower, and ſuch a poyſon unto all weeds, that it over-runneth, choaketh, and deſtroyeth them; but if it be ſown with Flaxe or Line, which is a much tenderer ſeed, and bringeth forth more tender leaves and branches, then you ſhall watch what weeds you ſee ſpring up, and in their firſt growth pluck them up and caſt them away, till you behold your Flaxe or Line to be grown above the weeds, and then you may let it alone alſo, for after it hath once gotten heigh, it will not be over-growne with weeds.

Making of ill earth bear, &c.

Now touching the other ſoyl, which through the extreame barrenneſſe thereof, refuſing to bring forth any good fruit at all; you ſhall in all poynts dreſſe it, as you dreſs your plain clayes deſcribed in the ſecond Chapter of this Book, beginning at the ſame time of the year that is then appoynted, or (if more neceſſary occaſions hold you) if you begin later, it ſhall not be amiſſe, and then at *Michaelmas* you ſhall plow it over the ſecond time, and manure it with ſea-weeds, and ſo let it lye at reſt till *March* (which is ſeed time) and then plow it againe, and manure it with ſea-weeds againe, and after the plowing, you ſhall hack

hack it, and if in the hacking you finde the earth ſtiffe and tough, then you ſhall harrow it before you ſow it. and harrow it again, breaking the earth ſo ſmall, and laying it ſo ſmooth as poſſible you can, uſing the help both of the clotting beetles, and all other tooles which may be available for breaking the earth and making the mould as fine as any aſhes, then after the firſt great ſhowre of rain, perceiving the ground to be well moiſtned, you ſhall inſtead of the back Harrows (which upon this earth may be too light) take the great rowler which is deſcribed in the book of the *Engliſh Huſbandman*, being a great round piece of timber of many ſquares, drawn either by Horſe or Oxen, but a ſingle Horſe is beſt both in reſpect of much treading the ground, as alſo for the ſwift going away or drawing of the ſame: for the ſwifter it is drawn, the better it breaketh the ground, and the lighter it leaveth the mould: and with this rouler you ſhall run over and ſmooth your ground very well, leaving no clot unbroken, and ſo let it reſt.

As for the weeding of this ground, you ſhall not reſpect it at all, for naturally it will put up no weed, the very ground of it ſelf being a very great enemy thereunto, nor ſhall you need to dreſſe this ground in the forme before ſaid, above once in eight or ten years only every ſeed time, when you plow it (as you ſhall not need to plow it at any time, but ſeed time only) you ſhall before the plowing, cover or manure the Land with the ſea weed before ſpoken of, which will give ſtrength enough to the ground, without any other aſſiſtance. Weeding.

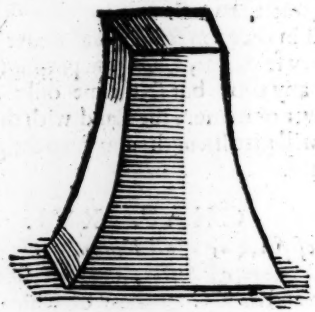
CHAP. XVI.

The manner of ſtacking of all Kind of grain or pulſe with greateſt ſafety, and leaſt loſſe.

IN theſe barren and hard Countries, of which I have formerly written all ſorts of buildings are exceeding coſtly and ſcarce, both in reſpect of the clime, which is commonly moſt extreame cold, mountainous, and much ſubject to ſtorme and tempeſt, as alſo through the great want of Wood and Timber, which in thoſe hard ſoyles doth hardly or never proſper, and therefore in ſuch places buildings muſt be both ſmall and dear, ſo that it will be very hard for the Husbandman to have houſe-roome for

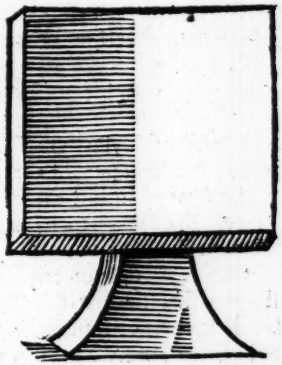
all his corn; but that of neceſſity he muſt be inforced to ſtack much, or the moſt part of his Corn without doores, which albeit it bea thing very uſuall in this Kingdome, yet is it in many places ſo inſufficiently done, that the loſſe which redounds thereby (partly by the moyſture of the ground, which commonly doth rot and ſpoyl at leaſt a yard thickneſſe of the bottome of the Stack next the ground, and partly through Mice, Rats, and other Vermine, which breeding in the Stack, do eat and devour a great part thereof; as alſo through many ſuch like negligent cauſes) is greater than a good Husband may with his credit be guilty of, or a profitable Husband will by any means ſuffer to be loſt ſo negligent.

To ſhew then the manner how to ſtack or mow your Corne without doores, in ſuch ſort, as neither the ground ſhall rot it, nor theſe vermines deſtroy it, nor any other loſſe come to it by way of ill Husbandry, you ſhall firſt cauſe four peeces of timber, or four ſtones, to be hewed broad and round at the nether end; like the faſhion of a Sugar-loaf, or this figure.

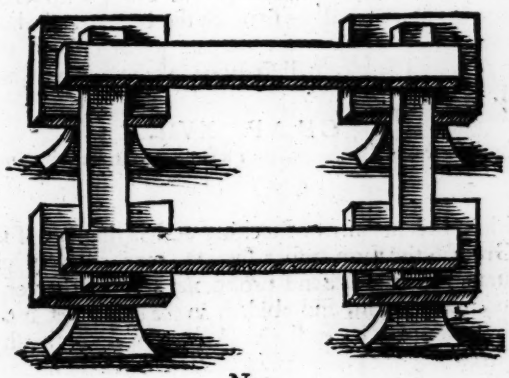


And theſe peeces of wood or ſtone ſhall be in length three-foot or thereabout, and in compaſſe or breadth at the bottome, two foote, or a foot and a halfe, and at the top not above one foot: theſe four peeces of wood or ſtone you ſhall place in your ſtack-yard, or other convenient place neere your thraſhing-floore

floore, and you ſhall place them four ſquare, of an equall diſtance one from another : then you ſhall cut out four ſmooth boards of two inches and a half thick at the leaſt, and full three foot ſquare every way, and theſe boards you ſhall lay upon the heads or narrow tops of theſe ſtones or peeces of timber according to this Figure.



Then ſhall you take ſtrong over-layers of wood, and lay them four ſquare from one board to another, according to this Figure.



And then upon thoſe over-lyers you ſhall lay other ſmaller poles cloſe one by another, and then upon them you ſhall mow or ſtack all your Corne, whether it be Wheat, Barley, Oates, Peaſe, or any other kind of grain, and be ſure if you make your ſtack handſome and upright, which conſiſteth in the Art and Workmanſhip of the Workman, you ſhall never receive loſſe in your Corn: for the raiſing of it thus two or three foot from the ground will preſerve it from all moyſture or hurt thereof, and the broad boards which cover the four ground-poſts will not ſuffer any Mice or other vermine to aſcend or come into the ſame.

Now for the manner of laying your Corn into the Stack, you ſhall be ſure to turne that part of the ſheafe where the eares of the Corne lye ever inward into the ſtack, and the other which is the ſtraw end, you ſhall ever turne outward, and by that meanes you ſhall be aſſured that no flying Foule, as Pigeons, Crows, and ſuch like, can do you any hurt or annoyance upon the ſame: Laſtly you ſhall underſtand, that you may make theſe Stacks either round, ſquare, or long-wiſe, yet round is the ſafeſt, and if you do make them long-wiſe, then you ſhall ſet them upon ſixe ground poſts, or eight, according to the length and proportion you would have it, and after your Stack is made, you ſhall then thatch it very well to keep out the wet; alſo if when you do ſtack your Wheat, you doe top your Stack with Oates or other coorſe grain, it will be ſo much the better, and the Wheat will lye in greater ſafety: for no part of a Stack well made, eſpecially a round Stack, will ſo ſoone take wet or hurt, as the top thereof.

CHAP. XVII.

The diſeaſes and imperfections which happen to all manner of Grain.

ALbeit the manner of Stacking and laying up of Corn or Grain in the form before ſhewed, may to every one give an aſſurance for the ſafe and profitable keeping thereof as long as it indureth therein, and abideth in the eare, yet becauſe divers neceſſities may compell the Husbandman to thraſh out his Corn, as either, for preſent uſe of Straw, Chaffe, Garbage, or o-

the

other commodities needfull unto him (as the ſeaſon of the year ſhall fall out) I think it moſt neceſſary in this place to ſhew how all manner of Grain and Pulſe, of what nature ſoever, may moſt ſafely and profitably be kept from all manner of annoyances, or corruptions whatſoever, being a work of that utility and goodneſſe that not any belonging to the Husbandman doth exceed it: Nor ſhall it be ſufficient to ſhew the offences and diſeaſes of Grain with their cures and healthfull preſervations, whilſt it is in the Husbandmans poſſeſſion, but alſo whileſt it is in the earth, and at the mercy of cold, heat, moyſtneſſe, or dryneſſe, and not onely ſubject to the malignant influences of Starres and Planets, with the increaſing and decreaſing of the moone and her operations: but alſo of divers other hurtfull Vermine; as birds, wormes, piſmires, dorres, ſnailes, moales, and other ſuch like: ſome whereof conſume and devoure the grain ere it ſprout, other ſprouting when the kernell is rotten, and turned to ſweet ſubſtance, and others after it is ſprouted, by devouring the firſt tender leaves, before they have any ſtrength to appear above earth, being as it were but ſoft white threads, not changed into the ſtrength of green, becauſe the aire and Sunne hath not yet lookt upon it.

To begin then with the firſt enemies of corn or grain, after it is thrown into the earth, there is none more noyſome then *Crowes*, and *Choughes* and other ſmaller birds, which flocking after the ſeeds man will in a manner devour and gather up the grain as faſt as it is ſown: for as according to the old ſaying That *many hands make light work*, ſo many of their mouths (being creatures that ever flye in flocks together) and their much nimbleneſſe in devouring, ſoone rob the earth of her ſtore, and deprive the labouring Husbandman of very much profit, and the Grain which theſe creatures do moſt conſume, is all manner of white Corn, as Wheat of all kinds, Rye and Oats, as alſo Hempe-ſeed, Lin-ſeed, Rape ſeed, and ſuch like: Neither are they only offenſive during this time of ſowing, but after it is ſown and covered, digging it with their ſtrong bills out of the earth, and ſo making the waſte greater and greater. Crowes, Pidgeons, and Birds.

The prevention or cure of this evill, is divers, as the affections of people, and cuſtome of Countries do inſtruct them: for The Cure.

ſome

ſome (eſpecially the *French-men*) uſe when they ſow theſe graines and ſeeds, firſt to ſprinkle it with the dregs or lees of their bittereſt oyles, which when theſe devouring fowles do taſte they refuſe to do any further hurt: others uſe to ſow Pigeons dung or Lime with their ſeed, which ſticking unto the graine, the unſavorineſſe thereof will make the fowl caſt up the graine, again, and leave to do further hurt. But foraſmuch as theſe medicines cannot ever be had, nor are ever wholſome for every ground, the onely beſt and ſafeſt meanes to prevent this evill, is to have ever ſome young boy, with bow and arrowes to follow the ſeeds-man and Harrowes, making a great noiſe and acclamation, and ſhooting his arrowes where he ſhall ſee theſe devourers leight, not ceaſing, but chaſing them from the Land, and not ſuffering them at any time to leight upon the ſame, and theſe ſervants are called Field-keepers, or Crow keepers, being of no leſſe uſe and profit (for the time) then any other ſervants whatſoever. Nor is it ſufficient to have the Field-keepers for the bare time of ſeed only, whileſt the grain is in ſowing, but he ſhall alſo maintain them untill ſuch time as you ſee the grain appear above the earth, which for Wheat or Rye, becauſe they are winter ſeeds, and ſo longer in ſprouting, will aske a full month; for all other ſeeds which are ſown in the Spring or Summer, a fortnight is full ſufficient: and this Field-keeper ſhall not fail to be in the field an hour before Sun in the morning, and ſo continue till half an hour after Sun ſet in the evening, for at the riſing and ſetting of the Sun is ever done the greateſt miſchiefe, for then are all creatures moſt eager and hungry; and though the indurance may promiſe much pain and trouble, yet queſtionleſſe the labour to any free ſpirit, is both eaſie, and pleaſant.

Additions. Alſo if your Field-keeper, inſtead of his bow and arrowes, do uſe to ſhoot off a muſket, or Harquebuſh, the report thereof will appear more terrible to theſe enemies of Corne, and the profit thereof will be a great deal more: for a ſhot or two of powder will ſave more Corn, then a weeks whooping and ſhouting, onely you muſt obſerve, that your field-keeper uſe no bullet or hail ſhot, for ſo he may turne ſcaring to killing. Now touching the deſtruction which theſe creatures make of Corn after it

is

is ſtackt up by tearing off the thatch, and digging holes and pits therein; to prevent that, you ſhall cauſe the thatcher to ſcatter upon the thatch, great ſtore of aſhes of any kind, or elſe Lime, that as the Pidgeons or Crowes teare up the ſtraw, the Lime or aſhes will ſparkle into their eyes and nares, which they will not indure; as for thoſe parts of the ſtack which cannot be thatcht, as the ſides and ends; upon them you ſhall prick divers ſcare-crowes, as dead crows, or dead Pidgeons, or any other rags, or the ſhape of a man, made either of thumb ropes of hay or ſtraw, or elſe ſome old caſt away apparrell, ſtopt with ſtraw, & ſo fixed on the ſtack, alſo in this caſe you may uſe Clap-mils, or ſuch like toyes, which make a great noiſe. But to conclud, the beſt prevention for theſe creatures (if you want ability to maintain a field keeper) is to take long lines of pack thread, and in them to knit divers feathers of divers colours, eſpecially white ones, and with little ſtakes ſo faſten them over the Corn, that with every breath of wind the feathers may dance and turn about, and the nearer that theſe blinks or ſcares come to the ground (when the corn is new ſown) ſo much the better it is, leaſt the fowl, finding away to creep under them begin not to reſpect them; ſo that a hand or two from the ground is ſufficient, Provided that the feathers and ſcares have liberty to play and move.

But if it be to ſave Corn in ripening, that is to ſay a little before it be reapt, when the eares begin to harden, or when it lyeth in ſingle ſheafe upon the land, for then fowl and birds do as great miſchief, as at any other ſeaſon, it ſhall then be fit that you raiſe theſe lines or ſcares upon higher ſtakes, ſo as they may play as much above the eares of corn, as before they did above the earth: and among theſe ſcares thus made upon lines in ſundry parts of the field, you ſhall upon other ſtakes place many other bigger ſcares, as dead Crows, Pies, Gleads, Pidgeons, or ſuch like, as alſo the proportion of a man formerly ſhewed you, or any rags of cloath being black, fowl, and ugly, like bakers malkins; and than this, there is no ſafer way for the defence of grain, or corn, from theſe birds, and ſuch like.

Of Piſmires.

The next great devourers or conſumers of grain are Piſmires or Ants, which although it be but a little creature, yet it is ſo labourſome, that the grain which they carry away or deſtroy by eating, amounteth to a great quantity, and the miſchief which

theſe little vermine do, after the Corn is covered in the ground, and before it ſprout, for they creeping in at the little chinkes of the earth, and finding the Corn, either drag it out, or eat it, ſo that it cannot grow, and the grain which they moſt hurt, is all manner of white corn, eſpecially your fineſt and ſmalleſt Wheat, for the skin or hull is thinneſt, and the kernel whiteſt and ſweeteſt: alſo to barley they do much hurt, eſpecially that which is fulleſt and beſt; likewiſe to Rye, Hemp ſeed, Lin-ſeed, and Rape-ſeed; as for Oates, becauſe it is double hull'd, and alſo your great whoſe ſtraw wheat, and polard wheat, which is thick hul'd, their hurt is not ſo much to them, and unto pulſe nothing at all, becauſe they are too heavy, too thick skinned, and too bitter in taſte.

The Cure. The beſt cure and prevention for theſe Piſmires is to ſearch your corn fields well eſpecially under hedges and old trees, and on the top of Moal-hills, and if you find any beds or hills of ants or Piſmires, preſently after ſun ſetting, with hot ſcalding water to drown the beds or hills, or with wet ſtraw and fire, to make ſuch a ſmoak upon them, as may ſmother them to death: alſo if your manure your corn lands with aſhes, lime, or ſalt ſand, you ſhall be well aſſured it will never breed Piſmires.

Of Dores. Next unto theſe, your Dores or great black Clocks are vehement deſtroyers of all kind of Corn, both white corn and Pulſe whilſt it lyeth dry on the earth, and before it ſprout; for after it beginneth to ſprout, they do no more touch it and theſe Dores deſtroy it in the ſame manner, as the Piſmires do, by creeping in at the ſmall crevices of the earth, and finding the grain, do as long as it is dry ſeed thereon, and though they are no hoarders, or gatheres together of the grain, keeping it in heapes in dry places as the Piſmires and other vermine do, yet they are great feeders thereon, and that continually: beſids, they will ever chuſe out the fulleſt and beſt corn and leave the leaner whereby they do the Husbandman double injury, as firſt to devour, and then to devour but the beſt only.

The Cure. The cure or prevention for theſe Dores, or black Clocks, is in ſeed-time to make great ſmoaks in your Corn-fields, which will preſently chaſe them from thence, for they are the greateſt enemies that may be to all manner of ſmoak: but if that be not ſufficient

ſufficient, then immediately before you ſow your Corn, you ſhall very lightly ſow your Land with ſharp Lime, and whenſoever the Dore ſhall find or taſte the ſmell or taſte thereof, preſently he will departt; or if he eateth of the grain that toucheth the Lime, it is as Preſent poyſon unto him, and there he dyeth.

After theſe, your field Rats and Mice are very vehement deſtroyers of all manner of grain or Seeds before they ſprout, eſpecially all ſorts of wheat, and all ſorts of pulſe, becauſe for the moſt part thoſe kind of grains in many ſoyles are ſown under furrowes and not harrowed, ſo that the furrows at firſt lying a little hollow, theſe Vermines getting in between the earth and them, will not only devour and eat a great part of the grain, but alſo gather together great heaps thereof into their neſts, as is often ſeen when at any time there neſts are found, ſome having more, ſome leſſe, according to their labours. Of field Rats and Mice.

And albeit in other ſoyles where the grain is ſown above furrow, and ſo harrowed in, and laid much more cloſe and ſafe, they cannot do ſo much hurt as in the former, yet even with theſe they will with their feet digge out the Corn in great abundance, and though in leſſe meaſure, yet do hurt that is unſufferable, ſo that to conclude, neither Rye, Barley, Oates, nor any other ſmaller and more tenderer ſeeds, are free from their annoyance and deſtruction.

Now the cure and prevention for theſe Field Rats, or Mice, are divers, according to the opinions of divers Authors, and divers of our beſt experienced Husbandmen: for ſome uſe in the Dog dayes, or Canicular dayes, when the Fields are commonly bare, to ſearch out the holes and neſts of theſe Rats and Mice, which are eaſily known, being little ronnd holes in the earth, made ſo round and artificially as if they were made within an *Auger* no bigger then the body of the creature that was to lye in it, and into theſe holes they uſe to put a few *Hemlock ſeed*, of which when the beaſts taſtes it is preſent death unto them: Others uſe to ſprinkle upon the land *Hellebor*, or neeſing powder mixt with Barley meal, of which the Mice and Rats will greedily feed, and it is a deadly bane and preſent death unto them. The Cure.

Laſtly (and which is the beſt medicine) if you take a good quantity of ordinary green glaſs, beaten alſo to powder, and as much

Copperas or Vitriol beaten alſo to powder, and mixe them with coorſe honey, till it come to a paſte, and then lay it in the holes, and moſt ſuſpicious places and it will neither leave Rat nor Mouſe about all your fields, but ſuddainly deſtroy them.

Of Worms. The next great deſtroyers of Corn and Grain, are *Wormes*, and they deſtroy it in the ſprouting, then when the ground hath rotted it, and the white or milke ſubſtance breaking open the upper husk, ſhooteth forth in little white threads at both ends, upon which whilſt it is ſo moiſt and tender, the worm feedeth extream, and ſo devouring up the ſubſtance or ſperme, is the cauſe the corn cannot grow or get out of the ground, and theſe *worms* being as it were the main citizens within the earth, are ſo inumerable, that the loſſe which is bred by them is infinite.

The Cure. Now the cure or prevention for theſe Wormes is diverſly taken: for ſome Husbandmen uſe but onely to ſtrike into the Plow-Reſt, and under the loweſt edge of the ſhebord certain crooked ſpikes of iron of great nailes half driven in, and turned back again, with which as the Plow runs tearing in the ground, and turns up the furrow, thoſe pieces of Iron kill and tear in pieces ſuch Wormes as are either within or under the furrow that the Plow caſts up, and this is ſure a very good Husbandly Practice, but not ſufficient for the deſtroying of ſuch a ſecret hurtfull vermine which is ſo innumerable, and lyes ſo much concealed; therefore, more curious Husbands uſe beſides this help of the Plow, to take Oxe dung and mixe it with ſtraw, and then to burn it up in the land making a great ſmoak over all the land, immediately before you plow it for ſeed, and it is thought that this will kill all the worms which lye ſo high in the earth, as to hurt the Corn.

Others uſe, before they make either the mixture or the ſmoake, to wet the ſtraw in ſtrong lye, and then adding it to the dung, the ſmoak will be ſo much the ſtronger, and the worms kill'd the ſooner; or if you ſprinkle ſtrong Lye upon your ſeed before you ſow it, there is not any worm that will touch the grain after: alſo, if you take hemp and boyl it in water, and with the water ſprinkle your ſeed before you ſow it, not any worm will come neer to touch it.

Of Rye not to be wet. Yet is it to be obſerved in this rule of wetting your ſeed corn, that

that by no meanes you muſt wet your ſeed Rye, for it is a Grain ſo warm and tender that it will neither indure cold, wet, nor ſtiff ground inſomuch that the Plow-man hath a Proverb, that Rye well drown'd in the Hopper; that is to ſay, it muſt neither be ſown on wet ground, nor in a wet day, ſince preſent ſhowres are apt to deſtroy.

Laſtly, it is thought that oft plowing your ground in the wane of the Moon is a very good means to deſtroy both.

Touching that practice which many uſe, to gather the wormes from their lands at Sun riſe, in bright dewie morning and Sun-ſet when the worms couple above the earth, I hold it more fit for ſmall Gardens, then large Corn fields.

Of Snailes. The next great deſtroyers of Corn are Snailes, and they deſtroy it after it is ſprouted, feeding upon the tender white threads and ſions which ſtart from the ſeed and would riſe above the earth being the ſtem or ſtalk on which the eares ſhould grow (were it not devoured and eaten up by the Snailes, and ſuch like Vermine) as ſoon as it begins to peep up, or as it were to open the earth; whereby it is driven back and forced to dye in the earth: for theſe creatures ſucking up the tender ſweetneſſe, deprive it both of life, and nouriſhment.

The Cure. The cure and prevention for this evill, is to take the ſoot of a Chimney, and after your Corne hath beene ſown a weeke or ten dayes, or within two or three dayes after the firſt ſhowre of Rain which ſhall fall after the Corn is ſown; you ſhall ſow this ſoot of the Chimney thinly over the Land, and not a Snaile will indure to come thereon: Others uſe (eſpecially in *France* and thoſe more fertile Countries) to take common oyl lees, and after the Corn had been ſown and is ready to appear above the ground, to ſprinkle it all over the lands, by which meanes no Snaile or ſuch like Creature will indure to come neere the ſame.

Of Graſhoppers. The next great deſtroyer of Corn is accounted the Graſhopper, and he alſo deſtroyeth it after it is ſprouted, and appeareth above ground, as the Snail doth, but ſomewhat more greedily, for he not only feedeth on the tender white ſtrings, but upon the firſt green leaves that appear alſo; by which meanes the Corne is not able to ſpring or bring forth a ſtemme or ſtalke to beare

the ear upon; or if it do put forth any, yet it is ſo ſmall, weak and wretched, that the ear growing on the ſame, is withered and lean, and the grain dry and blaſted, and no better than chaff: nor is there any corn that eſcapeth the deſtruction of the Graſhopper, for he generally feedeth on all: firſt on Wheat and Rye, becauſe they are the earlieſt then on the Barly and Oats, and laſtly on pulſe, upon whoſe leafe, and bloſſome he feedeth, whilſt the firſt is ſweet and pleaſant, or the other green.

The cure. Now the cure or prevention for theſe creatures, is according to the opinion of ſome Husbandmen, to take Worm-wood, and boyl it well in water, till the ſtrength of the Worm-wood be gone thereinto, and then with that water, in the month of *May* to ſpringle all your Corn over when the Sun is riſing or ſetting: and not any Graſhopper will come neer, or annoy the ſame Others uſe inſtead of Worm-wood to boyl Centaury, and to uſe the water thereof in the ſame manner as aforeſaid, and find an equal and right profit in the ſame: but it is moſt certain that any bitter concoction whatſoever uſed and applyed as aforeſaid, will not leave any Graſhopper about your field; for any bitterneſſe is ſuch an enemy unto them, that they cannot live where they feele any taſte thereof.

Of Moles. The laſt offence of living creatures belonging to corn or grain are Moals, which not only feed upon it after it is ſprouted, and ſpindled, by eating up the roots thereof, & ſo conſequently by killing the whole corn: but alſo by their digging and undermining of the earth, do roote up the corn and deſtroy it in moſt wonderfull manner, for where they make their haunts, or are ſuffered to digge, there they will deſtroy almoſt half an acree in a day: neither make they choice either of grounds or grain, for all grounds and grains are alike if the ground be not too wet or ſubject to inundations, or over-flowes (as for the moſt part corn grounds are not) for above all things Moals cannot indure wet ground, or earth of too moiſt a quality.

The Cure. Now the beſt cure or prevention againſt theſe creatures, is to find out the trenches and paſſages, which are moſt plain and eaſie to be known by the turning up of the new earth, and digging croſſe holes in the ſame, to watch either the going forth, or the comming back of the Moale and when you ſee her caſt, to ſtrike her

ther, with an iron fork made of many graines, as eight or ſix at the leaſt, and ſo to kill and deſtroy them, which is ſo generally known amongſt Husbandmen, that it is become a trade and occupation among them, ſo that it needs no farther deſcription; and the rather, in as much as for three or four pence a ſcore, you may have any ground cleanſed of Moals whatſoever..

Now there be ſome others which have not this art of killing or catching of Moales, which only do take brimſtone and wet ſtinking ſtraw, or any thing elſe that will make a ſtinking ſmoak, and putting fire thereto, ſmoak all the places of their haunts, and by that means drive them all clean away from the corn lands: many other practiſes they have, but none ſo good, certain, and probable as theſe already declared.

Thus far I have ſpoken of thoſe offences which proceed from living creatures, I will not intreat of thoſe which come and grow from the influence of the Heavens, being malignant vapours which ſtriking into the earth, doe alter the ſweet and pleaſant nouriſhment thereof, and change it into bitterneſſe and rottenneſſe, whereby the corn is either ſlain out-right, withered and made lean and unkindly, or elſe the kernel turnes to a filthy blackneſſe, being bitter, dry and duſty, like unto ſmoake, which the Husbandmen call ſmuttineſſe, or mildew. It commeth alſo another way, as namely by overrankneſſe, or too much fatneſſe of the earth, and this happeth moſt commonly onely to Wheat, for if blackneſſe happen to any other grain, it commeth of blaſtings, or other malice of the Stars for rankneſſe of the ground is in Barley, Rye, or Oat onely, makes them lye flat to the ground the ſtalke not being able to ſupport the multiplicity of the eares, and ſo by that meanes the graine wanting his true nouriſhment, grows withered, and of no validity; now that this is moſt eaſie to be found out, the rankneſs of the growing corn riſing as it were in cloſe buttles together, and the deep blackneſſe of the green blade will wich ſmall travel ſhew you.

Offences from the influence of the Heaven.

Of Smuttineſs and Mildew.

This to cure and prevent, it ſhall be good before you ſow your Grain, to ſow your land lightly over with chalk, for that will abate his over-rankneſſe.

The Cure.

There be other malignant qualities which proceed from the influences of the Heavens, or rather from the qualities of the

Additions.

Planets

Planets or Elements, which do many dangerous hurts unto Corn, as namely the Hail, the Lightning, the thunder, or the Planet-ſtruck, or blaſting, for all which the antient Husbandmen have ſuggeſted ſeverall Cures : As namely for the Haile, to plant the White-vine, or ſtick the branches therof in the Corn field : for, the Lightning, to cloſe a Hedge Toade in an earthen Pot and burying her in the corn Field, or to plant or hang up the feathers of an Eagle, or a Seal skin, or to Lawrell therein : for the Thunder, to Ring Bells, to ſhoot off great Ordinance, or to burn ſtinking weeds in the Corne Field : And for Blaſting, to take the fair horn of an Oxe, and mixing it with dung, to burn it in the Corn Field, or to take the branches of the Bay tree, and to plant them in the Corne-Field : but in as much as all theſe, and many other the like ſmell rather of Conjuration, Charme, or Exorciſm, then of any probability of truth ; I will neither here ſtand much upon them, nor perſwade any man to give further credit unto them, than as to the vapours of mens brains, which do produce much, many times out of meer imagination ; and ſo I will proceed unto thoſe things which are of far greater likelyhood.

Of Froſts. The next evill which hapneth unto Corn or Grain, is that which commeth by froſts and ſharp nipping colds, which ſtarving the root, and binding up all nouriſhment, maketh the Corn dry, wither, and never proſper ; and, than the violence of the froſts there is nothing more bitter to plants and ſeeds, For, even Raiſor like it cutteth the veins and ſinews in pieces, and as ſharp needles pricketh the heart of every growing thing : for as the fire which is moſt hot, when it rageth, burneth, and conſumeth all things ; ſo the froſt, which is moſt cold when it continueth, ſtarveth and choaketh, or ſtifleth whatſoever it embraceth.

The Cure. Now the cure or prevention for thoſe evills which do happen to grain by theſe great froſts, is as ſome Husbandmen ſuppoſe, to cover the Land over when it is ſown with aſhes : others ſpread ſtraw or rotten litter upon their Corn and not any of them but is ſufficient to prevent the worſt injury that froſt can do.

Miſts and Foggs. The moſt malignant quality which offendeth grain, is myſt and

and fog : which being naughty vapours drawn from the infected parts of the Earth, and fall upon the Corn, do not onely make the grain leprous, but alſo infecting the better earth after the kindly nouriſhment thereof, and as it were diſtilling corruption in the veins, makes all that depends thereupon moſt leprous and unwholſome, and thereby altereth the quality, quite turning ſweetneſſe into bitterneſſe, fulneſſe into emptineſſe, and goodneſſe into badneſſe, to the great loſſe of the Husbandmen, and the much diſreputation of the ground.

Now the cure and prevention of this evill, according to the opinions of all the beſt Husbandmen, is to take weeds green, the twigs of bramble, and other bruſh wood, wet ſtraw or ſuch like ſtuffe, and binding them up in great bundles, to put fire thereto, making a great and violent ſmoake, and then taking the advantage of the wind, to walke up and down the field and ſmoak it, which is thought a certain remedy to take away thoſe inconveniencies which happen by the venome and poyſon of theſe miſts and foggs. The cure.

Now to conclude, of the diſeaſes and infirmities which happen to corn whilſt it is in the field, there is not any formerly ſpoken of more dangerous, or of vilder quality then the reaping, mowing, or gathering in of Corn, wet, or too green, and unhardned : for ſuch moyſture, when the corn is ſheaved up cloſe together, or ſtackt or mowed up, forthwith gathereth heat, and either ſetteth the Corn on fire, or elſe the moyſture being of leſſe quantity, and not apt to flame, yet it corrupteth the grain and ſtraw, & breedeth a ſtinking mouldineſſe or rottenneſſe about it: ſo that the grain either becomes dung or dirt, or at leaſt ſo ſtinking and unſavory, that it is good for no uſe or purpoſe, as is dayly ſeene where careleſſe Husbands gather in their grain without reſpect or government, making the old proverb good, That haſte ever brings waſte. Corn reapt wet.

The cure and prevention of this evill, is the well-husbanding and managing of the harveſt, as firſt with a carefull and well judging eye to look upon your corn, and to know by the hanging downward of the eare, looking as it were back to the ground) and by the hardneſſe of the grain, whether it be ripe or no; then to look into the cleannеſſe of the corn, as whether it The Cure.

be full of greenneſſe, as graſſe, weeds, and ſuch like : or cleane of it ſelf without any mixture : if you find there be any weeds mixt with it, then you may reap it ſo much the ſooner, though the kernell be not ſo well hardned as you would wiſh : and above all things have a care never to ſhear corne in the rain or wet, no not ſo much as with the mornings or evenings dew upon it, but even in the heat and brightneſſe of the day. Then having reapt your corn ſo full of graſs and weeds, you ſhall by no means ſheafe it, but ſpreading it thinne in the Sun, let the graſs wither all that day, which when you perceive to change colour and grow drye, then bind it up in ſheafes, and let it lye ſingle a day, that the wind and Sun may get into it, and dry the greenes more ſufficiently ; then lay it in ſhocks of ſix or eight ſheafes a peece, and in thoſe ſhocks, turne the eares ſo inward, that the other bigger ends may defend them from all the rain, wet or dew that may befall upon them : then a day or two after, lay them in ſhocks of twenty, or of four and twenty ſheafes a peece, and in thoſe ſhocks, let them take a ſweat ; then break them open in a bright Sun ſhine day, and letting the aire paſſe thorow them, to dry them, forthwith lead the grain home, and houſe it or ſtack it in ſuch ſort as was ſhewed in the former Chapter, and be ſure the grain thus ordered and dryed can never take hurt : but if the ſeaſon of the year fall out ſo extraordinary evill and full of wet, that by no meanes you can get your Corn drye home (which although it be ſeldome ſeen, yet it is poſſible to be ſeen) in this caſe you muſt bring it home as well as you can, and having your Kilne well ordered and bedded, you ſhall lay as many ſheafes thereon, as it can contain, and turning and toſſing them over a very gentle fire, by ſlow degrees dry them very perfectly as near as you can, with no greater a heat than that which the Sunne giveth, and then mow and ſtack them up at your pleaſure, for the ayre will ſweeten them again, and take away all ſmell of ſmoak or other onnoyance ; only obſerve, not to ſtack them up whilſt the fire or heat is in them, but when they are cold, and ſo they will be as ſweet as may be.

Of Corn waſht.

Now it is not amiſſe that I ſpeak here a word or two of waſht

waſht corn, or the waſhing of corn : True it is (as before I have written) that all ſorts of wheat whatſoever, are ſubject either by the rankneſſe of the ground, blaſting or elſe mildewing, to a kind of filthy ſooty blackneſſe, as is already ſhewed ; and this ſooty corn is taken two wayes, generally and particularly : generally, if the whole land be ſtricken, and no corn ſaved, but all ſpoyled, which is called mildewed ; or particularly, where but ſome certain eares are ſtrucke, or ſome certain part of the grain, as when it is black at both ends, yet full and ſound in the middeſt, and this is called ſmutcht corn, being disfigured in part, but not in all. This ſmutcht corn, which is ſtrucken here and there, if the blaſted eares be not culled out from the other, (which to doe is an husbandry exceeding good and very worthy) when it commeth under the ſtayle, the duſt of thoſe black blaſted eares will ſo foul all the reſt of the corn, that it will look black and ill-favoured, and ſo become unſerviceable and unmarketable; for the blaſted corn is both bitter and unwholſome : In this caſe, you muſt of force waſh this corne, and you muſt do it in two or three waters, till you ſee all the blackneſſe quite gone ; which done, then drain away your water cleane, and laying the corn on fair window cloaths, or coverlids, lay it in the heat of the Sunne, and ſo dry it again till it be ſo hard that it will grind : But if the time of the year will not ſerve for the Sunnes drying it, then you ſhall dry it on a Kilne with a very ſoft and gentle fire, and then cool it in the aire to recover the ſweetneſſe again, and then the corn is as ſerviceable as any other : onely for ſeed it will by no meanes ſerve, both by meanes of the blaſting, which makes the kernell imperfect at both ends where it ſhould ſprout, as alſo the too much drying thereof ; by which it is ſo much hardned, that the ground hath no ſtrength to reſolve it ; therefore it is the Office of every Husbandman when he chuſeth his ſeed corn, to eſchew by all meaces this waſht corn as a grain that is loſt in the earth, and will by no means grow.

Therefore that you may know waſht corn from all other corne, and ſo not to be cozened by any deceit in the ill Husbandman, you ſhall take it up in your hand, and if the corne

To know waſht corn

look bright cleer, and ſhining, being all of one intire colour, without change or difference, then be ſure the corn is unwaſht and perfect.

But if you find it look whiter at the ends then in any other part of the corn, and that the whiteneſſe is black and not ſhining, ſo that there is a changeable colour in the corn; then be aſſured that the corn is waſht, and then by no means apt for ſeed or increaſe.

Again, put three or four grains into your mouth, and chew them, and if then the taſte be ſweet and pleaſant, and grind mellow and gently between your teeth; then is the corn not waſht: but if it have a bitteriſh, or fleſhy raw taſte, and grind hard between your teeth, or with much roughneſſe, then hath the corn been waſht, and dryed again, and is not good for ſeed; alſo when corn is more then ordinarily moyſt, or more then ordinarily dry, both are very ill ſignes, and ſhew either imperfect corn, or imperfect keeping, for the beſt and good corn indeed, ever holdeth an indifferent temperature, betwixt dryneſſe and moyſture.

CHAP. XVIII.

How to keep all manner of grain, either thraſht or unthraſht with leaſt loſſe the longeſt time, and how to preſerve it from all infirmities, and vermine in the Houſe or Garner.

Keeping of Corn two-fold.

TO proceed to the keeping and preſerving of corn and grain, it is to be underſtood, that it is to be done two ſeverall waies that is to ſay, in the ear and out of the ear: in the ſtack, when it is cleanſed and dreſſed.

Keeping Corn in the ear or in the chaffe:

Touching the keeping of Corn in the Ear or in the Stack, there is no better nor ſafer way then that already deſcribed in the ſixteenth Chapter, being free from all offences whatſoever that can come to hurt it.

Now there be others that cut off the eares of their corn, and then put them into great Cheſts or Hutches of wood (ſuch as are very frequent and much in uſe in *Ireland*, and other Countries where war rageth) and ſo keep it ſweet and good many yeares:

Others

Others uſe to beat it out of the eare, but not ſeparate it from the Chaffe, and then laying a leare of the Straw more then a foot thick, to lay a good thick lear of the thraſht corn; & thus lay lear upon lear, till you have made up your ſtack, in ſuch proportion as you ſhall think convenient; and this will keep all kind of corn, or grain, or other ſeeds, ſound, ſweet, and fit for any purpoſe, at leaſt a dozen years, or more, as ſome have ſuppoſed, without either too much drying, withering, moiſtening, or moulding And ſure this is a very excellent way for the ſtoring up of much corn in a very little roome, and may as well be done with corne as with ſtraw; only it is not to be done in barne nor houſe, becauſe Mice, Rats, and other kind of vermine will work much deſtruction thereupon, but on a Sack or Hovell made and proportioned in ſuch form as was ſhewed before in the ſixteenth chapter, and ſo it will ſtand ſafe without all annoyance, as long as it ſhall pleaſe the owner to keep it; ſure I am, it will laſt thus fully twelve years, yet ſome Authors affirme; it will laſt fifty years, but that is a ſpace of years beyond my tryall.

Touching the keeping of Corn after it is thraſht and dreſt, it is divers wayes to be done, as by ſtowage or place of lear, as Garners, Hutches, and ſuch like, by labour and induſtry, as with the ſhovell, or elſe by device or medicine. Keeping of Corn out of the Eare or dreſt.

For Garners, they be made divers wayes, according to the nature of the country, and cuſtome of the people. Of Garners.

Some are made with clay and lome troden with hair, ſtraw chopt, and ſuch like: but theſe are the worſt, and do ſooneſt corrupt corn; for although they are warme. which is a great preſervation to corn, yet they yeeld duſt, and from that duſt is bred fleas, mites, weavels, and other Vermine which do ſpoyl corn, and make it eaſily rot.

Others are made of ſtone and lime, but they are ſubject, againſt wet weat, to yeeld forth a moyſt dew which corrupteth and rotteth corn.

Others are made of Brick and Lime, and they are very good againſt the weavell, and other ſmall Vermine, but the Lime is ſharp, and ſo conſequently very unwholeſome for all manner of Grain.

The beſt Garner that can be made to keep all manner of grain

in, is made of playſter, burnt and brought into morter, and ſo raiſing it up with the help of ſmall ſtones hidden & placed in the midſt of the wall, to make both the inſide and outſide of the Garner of ſmooth playſter, no ſtone being ſeene but hidden at leaſt two finger thick on each ſide, and all the bottome alſo muſt be made of plaiſter ; for no floor keepeth corn ſo well, of what kind ſoever it be ; and theſe Garners would be placed as neere as you can to the backs, or ſides of chimneyes ; or as neer the aire of the fire as you can conveniently ; for as there is nothing more cold then playſter, yet it is ever ſo dry and free from moyſture, that with no change of the air or weather it relenteth, but keepeth the corn ever in one ſtate of goodneſſe, whilſt the warme ſtanding thereof is ſuch a comfort in the winter, and the naturall coolneſſe of the thing ſo ſoveraign in Summer, that the graine ever abideth in one ſtate without alteration.

Of Hutches. Now for hutches, or great cheſts, bins, dry fats, and ſuch like, they are made of old dry, and well ſeaſoned Oak boards, plained ſmooth and cloſe joyned and glewed together, with covers and lids made alſo very cloſe, whereby little or no ayre can come in : ſome of theſe great bins, or hutches, made of dry boards, are made open and without covers, but they are not ſo good, for the ayr cooling the upper part of the corn, and the middle part ſweating, breedeth corruption, or muſtineſſe, which hurteth and ſpoyleth the corn : beſides, they are ſomewhat too warm, and thereby make any green corn apt to corrupt and ſmell.

Touching the uſe of Garners and Hutches, they are principally to keep Malt after it is dryed, or Barley which is for the uſe of bread or meal, and here is to be noted, that the beſt manner of keeping Malt, is to keep it in the corn, that is to ſay, in the duſt and other filth which commeth with it from the kilne, as thus ; when firſt you lay your malt on the kilne to be dryed, you know there is at one end a certain ſprout, or ſmall thred, which growes from the corn, and is called the corne, which by the rubbing and drying of the malt falls away, and leaves the corne clean, and ſmug of it ſelf, and when you trim and dreſſe up your malt for the mill, is winnowed and cleanſed away : this you ſhall preſerve and put altogether into your Garner or Hutch, which

which will ſo mellow and ripen your malt, that in the ſpending thereof. A peck will go further, then a peck and a half kept of a contrary faſhion, and although ſome are perſwaded that this Come or malt-duſt, is a great breeder of the worm or weavell, by reaſon of the much heat thereof, being indeed of the pureſt of the heart of the corn; yet it is not ſo, unleſſe ſome rankneſſe or moyſture do get to the corn; and then it breeds weavels in infinite aboundance, and therefore by all means be ſure that your Garners, and Hutches, do ſtand exceeding drye, and then there is no fear of the loſſe of corn, nor ſhall you need to dreſſe or winnow your malt but as you ſpend it.

Laſtly, here is to be noted, that although I here joyn Garners, Hutches, Cheſts, and Bins together, yet I make them not all of equall goodneſſe; for the plaiſter garner is abſolutely the beſt of all, the cloſe hutch or cheſt next, and the open bin laſt; yet any, or all, ſufficient enough to keep malt, barley, or ſmall ſeeds, divers yeares without imperfection.

It is written by ſome of the antienteſt Authors, that Wheat hath been kept in theſe cloſe hutches or cheſts ſweet, the ſpace of fifty years; yet I hold the rule ſomewhat doubtfull, both becauſe Wheat of it ſelf, lying ſo cloſe packt together, is apt to heat and ſweate, and that heat commonly turneth to faultineſſe, and the ſweat to corruption: but that it may thus be preſerved from worms, weavells, mites, and other vermine, breeding in corn, it is doubtleſſe and infallible.

To preſerve Wheat.

Now for the preſervation of Wheat, which is the moſt principall grain, of greateſt uſe, and greateſt price, and therewithall moſt tender, and apteſt to take hurt, the experiments are divers, as mens fancies, and practiſes have found out: for ſome Husbandmen hold opinions, eſpecially the *French* and *Spaniſh*, that if you take the lees of common oyle (ſo it be ſweet) and ſprinkle it upon your wheat as it lyes, either in the garner, or upon the floor, that it will preſerve it from all corruption and annoyance whatſoever, nor doth it preſerve Wheat only, but all other manner of grain whatſoever; nor doth it preſerve corne alone from miſchief, but if corn by caſualty be tainted or hurt, it doth recover it again, and brings it to the firſt ſweetneſſe; and if either wormes or weavels be bred in it, the oyle preſently kills

kills them, and frees the corn from that miſchief: as for ſmaller ſeeds, as hemp, line and rape, this oyl doth not only keep them long and ſound, but alſo feeds and nouriſhes them, and makes them better, either for the ground, or for uſe, either in the mill or in medicine.

There be others that uſe to take chalk, and beat it to powder, and then ſcatter it amongſt their Wheat, when they put it into the Garner, and have found that thereby their graine hath been wonderfully preſerved from all imperfection; and ſurely there is great reaſon for the ſame, becauſe the dryneſſe of the chalk drinketh up the moyſture which ſweateth from the grain, and is the firſt breeder of all putrefaction: alſo it cooleth and aſſwageth the immoderate heat which is ingendred in the Corn, by reaſon of the packt and cloſe lying together.

Again, there be others which uſe to lay great ſtore of Wormwood amongſt their Wheat, which likewiſe preſerveth it from all annoyances, eſpecially from Worms and Weavels, as alſo from Mice, Rats, and ſuch devouring vermine; neither will the Corn corrupt or grow faulty, as long as the Worm-wood remaines amongſt it. In *Italy*, the carefull Husbands uſe to take a certain dry earth or clay, called earth of *Olinthus* or *Cerinthus*, and this earth they beat amongſt their Wheat, and then put into the Garner or Hutch, and it will keep it ſound and ſweet divers years together; then when they have occaſion to uſe it, with ſmall reeing fives to dreſſe it from the corn, and ſo preſerve the duſt, which will laſt and ſerve you many years together, even almoſt an age, as ſome have reported, and is at this day to be ſeen in many parts of *Italy*, and other places.

Again, I have for mine own part ſeen in the Iſland of the *Azores*, certain very great large Caves, or pits made under the earth, of the faſhion of a *Spaniſh* earthen leare, that is to ſay, great and ſpacious in the midſt, and narrow both at the top and bottome, like a braſſe pot, or great glaſs viall, and made as ſmooth within as may be, and in theſe caves or pits, they firſt lay chaffe, and then their thraſht Wheat, filling it up full to the top, or within a handfull thereof, which they fill again with Chaffe, and then cloſing the top with a broad ſtone, they cover it

it over with earth ſo cloſe and unperceivable, that you may walk or travel over it without any ſuſpition; and for mine own part, I have my ſelf digged up many of theſe pits, and found great ſtore of Wheat, both in the high-wayes, and other moſt ſuſpitious places; and ſurely it is thought, and experience in thoſe places makes it good, that in theſe caves or pits you may keep wheat as long as you pleaſe, as *Pliny* ſpeaketh of, which is an hundred, or an hundred and twenty yeares, without hurt or putrefaction either of heat, moyſture, wormes, weavels or any other Vermine whatſoever which conſumeth or devoureth Corn; yet how I may recommend this experiment to our Nation, I am uncertain, becauſe the much moyſture of our climate, and the cold rawneſſe thereof promiſeth a contrary effect for the great enemies unto grain, are violent cold and moyſture, and with us it is very difficult to make any caverns under the earth but they muſt be ſubject unto both: therefore onely to thoſe which live in hot ſandy Countries, high and free from ſprings or waters, or in dry and rocky grounds, where theſe mynes or hollow places may be hewed out, as in a main and firm quarry, I recommend the tryall of this practiſe, with this aſſurance that where the ground is fit for that purpoſe, as in any of your ſand grounds or gravell earths, as in *Norfolke*, *Middleſex*, *Kent*, and many other ſandy climates; or in rocky ſcituations, as in *Notingham*, *Bath*, *Briſtol*, and ſuch like, you may keep your wheat good, ſound, firme, and free from all annoyances, even as long as you ſhall pleaſe to keep it, both without putrefaction in it ſelf, or waſte made by other devouring wormes and vermin; but if in a more moiſt place, as in clay or other mixt earth, which ever is vomiting wet and dewiſh humours, you are forced to approve this experiment; then you muſt neceſſarily lyme all your cave or hollow Mines within, at leaſt half a foot thick with tyle ſher'd and plaiſter laid wall-like together, and then the plaiſter dawb'd at leaſt three fingers thick above all, and ſo you may keep your corn as ſafe and as ſound as any hot ſoyl whatſoever, but without it, your corn will not indure a week without rottenneſſe, faultineſſe, mouldineſſe, and ſtinking.

To conclude, having ſhewed you all the moſt approved and beſt experiments for the keeping and preſerving of wheat, there

is none better, or ſo good as this ſilly plain one, which I will here deliver: and that is, firſt, as near as you can, reap your Wheat at the change of the moon; for wheat which is ſo reaped, is ſeldome or never ſubject to loſſe or putrefaction (being got in dry, or in husbandly manner ordered and handled) becauſe that cæleſtiall body hath ſuch a power and influence in the grouth of corn and ſeeds, that as ſhe groweth ſo they grow, and as ſhe waneth, ſo they abate and wither.

And truly for my own part, in my poor Husbandry, I have made this obſervation, that I have reaped corn at the beginning of the wane (to mine eye and judgment) great, full, and bol'd as the plow man calls it, and within few dayes after, when it came to thraſhing I have found it moſt poor, hungry, and ſmall corn: nor could I give or find any other reaſon for the ſame, but that it was reaped in an ill and moſt unſeaſonable time: for, on the contrary part, I have ever found that corn reaped upon the change, being ripe, full, and every way fit for the barne (and the weather fair and dry above head) it hath never altered, but kept his firſt and perfect goodneſſe, ſo that I cannot chuſe, but in this caſe think the obſervation of the Moon to be a thing of great effect and validity, appoynted by God as a ſecond meanes for our help and profit: when therefore your corn is thus ſeaſonably and well got in, you ſhall thraſh it, winnow it, and dreſſe it ſo clean as you can; then carry it up into your chambers or lofts appoynted for that purpoſe, and whoſe floors by all meanes I would wiſh to be caſt of the beſt plaiſter; for boards is too hot, and clay is too apt to breed vermine: On this plaiſter floor you ſhall ſpread your wheat, not above a foot thick at the uppermoſt, and ſo let it lye, obſerving once in four or in five dayes at the moſt, with a large wooden ſhovell to turn the wheat quite over & over, and thus doing, you ſhall be ſure to keep it as ſweet, ſound and good, as when it firſt came into the barn: for neither can the heat, ſweat, nor coldneſſe offend it; the firſt being cooled and tempered by the opening and diſperſing; the ſecond dryed up by the ayr which hath free recourſe into it, and the laſt comforted by the labour and toſſing of the ſhovell, caſting it up and down from one place to another: and though ſome curious husbands may object that this manner of keeping corn dryeth it

it somewhat too much and thereby disableth it for some particular purposes, as for seed and such like: yet in that they are much mistaken; for this stirring and moving of Grain, is not a drying of it, but rather a great comforter and strengthner of it, dispersing backe into the corne, those wholsome vapours which should doe it good (by way of communication and fellowship with the Grain) and expelling those ill humors which sweating out of it would otherwise confound and hurt it, so that in conclusion for the true and long keeping of Wheat sweet, sound, and perfit, without losse or corruption, there is no way more safe or easie, then this last expressed, being of all other the best, although in shew it appear sleight and triviall, as for the most part things of greatest moment in this nature do: but to the judicious Husbandman I refer it, whose aym is at the worth and substance not at the words and curious glosse, set forth in strange ingredients.

To preserve Rye.

Touching the keeping of Rye or Masline, or, as some call it, munck-corn, or blend-corn, being part Rye, and part Wheat mixed together, that which preserveth Wheat will also preserve it, for they are grains of like nature, onely the Rye is somewhat hotter and dryer, and therefore will endure somewhat more moysture, yet to speak particularly touching the preservation of Rye, there is nothing better then the plaister floor, and oft turning; the close Hutch is also exceeding good, so is the Pipe or dry fat, but being once opened, and the aire entring into the corn, except it be soon spent, it will soon putrifie, for though in the close keeping, it last long, yet when it comes to the ayr it will quickly receive taint. Lastly, for the profit in keeping of Rye, indeed there is nothing better then to ply it and tread it hard into hard vessels or barrels, wherein salt hath been much lodged, or other brine or salt matter: provided alwaies that the vessels be sweet and untained, no wayes subject to faultinesse or other unsavory smells, from which there is no preservation.

To preserve Beanes.

Concerning the preservation and keeping of beanes, which are indeed a more grosse and fatter Grain then any heretofore written of, and out of the fulnesse of their substance, more subject to moysture and those dankish humors which corrupt corn:

the carefull Husbandman obſerveth two rules: firſt, not to thraſh any Beanes or Pulſe, more then for neceſſary uſe (as for the Stable or Mill) before it be middle *March*, at which time the Grain, having taken a kindly ſweat in the Mow, Stack, or Hovell, is become ſo dry, firme, and ſolid, that no floor, wall, or other place of Leare can make it relent, or give again (except great abuſe, and too moiſt keeping) for it is to be underſtood, that this ſort of Pulſe or Grain is of it ſelf ſo exceeding moiſt and apt to ſweat in the Mow, that all Husbandmen endeavour by no meanes to houſe it, or lay it within doores, but ſeek to make it up in ſtacks and hovels without doors, not ſo much that houſe-room is wanting, as that the benefit of the Sunne, and Aire, which pierceth through the ſame, dryeth and ripeneth the corn in ſuch kindly manner, as maketh it as ſerviceable as any other: and indeed, the firſt invention of ſtacks, hovels, reeks, and ſuch like, did not ſpring ſo much from the want of houſing as from the good and profit which the Husbandman found to accrue to this kind of Grain, onely by reaſon of laying it abroad; for it is certain, that Beanes and Peaſe neither grow together, nor ripen together, but put forth their increaſe one after another; for you ſhall ſee upon one ſtalke, bloomes, ſwads, and ripe cods: ſo likewiſe in the gathering of Pulſe (when it is reaped from the ground) you ſhall ſee ſome dry and withered, ſome ripe, ſome halfe ripe, ſome abſolutely green, and as but now in growing.

Now all theſe muſt be reapt together, and if you ſtay them in the field till all be of like dryneſſe, queſtionleſſe the oldeſt will ſhake and ſhed upon the ground before the youngeſt be ripened, and what that loſſe will redound to, every Husbandman can judge: So alſo to houſe and mow up in a cloſe mow, the dry pulſe with the green, ſurely the green cannot chuſe but inflame; and heat the dry, and the dry ſo heated to give fire to the green, till both be either rotted or conſumed: and hence it came, that expert Husbandmen deviſed to lay their pulſe, for the moſt part, ever without doors, in ſtacks, reeks, and hovels, that the ſun and wind paſſing thorow them, might bring all the grain to an equall dryneſſe and hardneſs.

Again, Pulſe being of all grain the coorſeſt and fulleſt of ſub-

ſtance

ſtance in it ſelf, and the ſtraw ever big and ſubſtantiall, and full of broad thick leaves, ever moyſt and ſappy; it muſt needs follow that this grain muſt ever be moſt apt to ſweat in the mow, and ſo neceſſarily craveth the greateſt ſtore of aire, and the longeſt time in drying; ſo that to return to my firſt purpoſe, it muſt needs follow, that no Beanes or Peaſe can be ripe or ſeaſoned in the mow, till it be mid *March* at leaſt; for it is an old ſaying, among the beſt husbands, *That a March wind is ſalt which ſeaſoneth all Pulſe*: And if uſe or neceſſity compel men to thraſh their Pulſe before that time, the grain is ſo imperfect, that it muſt be kiln dryed, or elſe it is fit neither for the uſe of bread nor provender,

Now herein is to be underſtood, that Peaſe or Beanes which are kiln-dryed, may be kept ſound, ſweet, and good, either on plaiſter-floores, boarded-floores, or earthy-floores, the ſpace of many years, without turning, or toſſing; nor need you to reſpect how thick the heap lye, ſince beanes after they are once dryed on the kiln, or in the Sunne, never after will thaw, give again or relent, but remain in their firſt ſoundneſſe: But if you preſerve your Beanes for other uſes, as to boyl in your pot, and feed your ſervants withall as is uſed in *Somerſet-ſhire*, and many other Weſternly parts of this Kingdome, then it ſhall be good for you to take oyl-barrels, oyl-caſk that is ſweet, and firſt Calk them all over within and without with aſhes, and then put your beanes therein, and cloſe up the heads, and as it is affirmed by divers great authors of Husbandry, it will keep beanes ſound, ſweet, and good, twenty yeares: nay, ſome gives inſtances of Beanes which have been thus kept and preſerved the ſpace of one hundred and twenty yeares; and ſurely I am perſwaded that if Beanes be well and dry got, and threaſht at a ſeaſonable time of the yeer, as in *March April*, that thus kept, they will laſt the uttermoſt of a mans pleaſure.

Preſerving of Peaſe or Fetche.

Now for the keeping or preſerving of Peaſe or Fetches, which of all other Grain whatſoever, is moſt ſubject to rottenneſſe and imperfection, becauſe out of its own nature it is apt to breed wormes, weavells, and mites, by reaſon of the much luſhiouſneſſe and ſweetneſſe of the kernel of the Grain; you ſhall in all things obſerve the ſame courſes that you do with your

Beanes, both touching your gathering, drying, ſtacking, and alſo thraſhing; for as they are moſt apt to go together, being near of nature and condition one to the other, ſo it is fit that you doe apply unto them one and the ſelf ſame medicine or remedy.

And herein is to be noted, that as peaſe are of more generall uſe then beanes, as for Horſe Provender, feeding of Swine, Pidgeons, Pullen, and ſuch like; as alſo for bread, pottage, to boyle with or without meat; for certainly, it is a moſt wholſome and ſtrong food, as may be ſeen by the people of *Devenſhire*, *Cornwall*, and *Somerſetſhire*, of whoſe great ſtrength of body not any reaſon can be given more probably then their much feeding on this graine, and their acquaintance with much and ſtrong labour: So they ought with more care and circumſpection to be preſerved from all thoſe annoyances that naturally are apt to hurt them, as wormes, rottennеſſe, mould, muſtineſſe, and ſuch like.

And firſt, there is nothing better for the long and well keeping of Peaſe, then the very well drying of them, either in the Sun, or on the Kiln, eſpecially thoſe which you uſe for bread, provender, or feeding of ſwine: and although ſome Husbands uſe to feed ſwine with undryed Peaſe, may many times both undryed and undreſt that is to ſay, the Pulſe or Chaffe not taken away; and are of opinion that the Grain ſo given, ſooner feedeth and fatteth up Swine then the other, yet they are deceived: for albeit it ſwell and puff up a-bit, yet is the fleſh and fat neither ſo good, ſound, and long laſting, as that which is gotten with dry food, nor doth it make a Swine ſo thirſty; and the Husbandman is ever aſſured, that when his Swine drinks not well, he feeds not well: therefore what Peaſe you keep for bread, or feeding of Cattell, by all means dry them well, and lay them either in Garners or Floores, and they will laſt ſound and good without breeding worms or weavel, as long time as you pleaſe. But thoſe which you keep for food at your own table, as in pottage or other uſes, muſt by no meanes be too much dryed, becauſe then they aske a double time in boyling, and ſpend a double quantity of fewel in their preparing.

Some

Some uſe after they be clean thraſht and dreſt, to lay them in a cool cloſe Garner, either of Plaiſter, Earth, or boords, of which Plaiſter is the beſt; as for any thing that relenteth or yeeldeth moyſture, as lime, ſtone-walls, or ſuch like, it is moſt hurtfull, and immediately maketh peaſe mould and rot: alſo it is good to lay your peaſe in thick heapes in your Garner, for that will preſerve them moyſt the longer time: but to ſpread them thin upon the flowre; by which meanes the Sun, Ayr, and wind may paſſe thorow them, is not ſo good, for it dryeth them too ſore, and taketh from them much of their ſweeteneſſe and goodneſſe, which ought moſt carefully to be preſerved. There be others which preſerve theſe tender meat Peaſe by thraſhing them up, and then letting them lye in their own pulſe or chaffe, and not dreſſing them, but as they have occaſion to uſe them; and queſtionleſſe this is a very good and laudable way; for the pulſe and chaffe doth maintaine them ſweet and moyſt, and yet keepeth them withall ſo warme and comfortable, that they laſt much longer, then any other way whatſoever; and in this manner of preſerving peaſe is to be noted, that by all meanes you muſt let them lye upon a dry earthen floore, ſo long as they are in the chaff, rather than on the boord, or on plaiſter, and yet in this caſe the boords are better then plaiſter.

Laſtly, and which indeed is the beſt experiment of all other, if you intend to keep peaſe any extraordinary long time, you ſhall take barrells or dry Casks, well and ſtrongly bound, and pitch them within exceeding well, with the beſt pitch or bitumen that you can get, and then ſprinkle the pitch all over with ſtrong vinegar; then take your peaſe, being clean and well dreſt, and put them into the barrels, preſſing them down cloſe and hard; then head up the barrells, and let them ſtand dry and coole, and they will preſerve your peaſe ſound, ſweete, and good for any uſe whatſoever, as long as you pleaſe, be it for ten, twenty, or thirty yeares, according to the opinions of ancient Husbandmen, and other provant Maſters, that have lived and commanded in Towns beſieged, and Towns of Garriſon; neither ſhall any worm, mite, or weavel, ever breed in it, or offend it: nay if any have in former

time been bred in them, this manner of keeping the grain killeth them, and deſtroyeth them for ever.

Preſerving of Lentils or Lupins.

Now there is another ſort of Pulſe which are called Lentils or Lupins, which albeit they are not ſo generally uſed for the food and ſuſtenance of man, yet they are for Horſe, Swine, and other cattle as much in requeſt as any grain whatſoever, and indeed doe feed fatter, and ſooner than other ordinary pulſe and the fleſh ſo fed is ſweeter and pleaſanter both to the eye and to the taſte, then that which is fed with Beanes or Peaſe; alſo they are a Pulſe very Phyſical and good for many medicines, as may appear by the works of many learned Phyſitians; and theſe the longer they are kept, the better they are, and fuller of profit. To preſerve them then in good and ſound eſtate, it is meet to reape them in very fair weather, and to ſtack them up exceeding dry, and if they be laid in the barne, or any cloſe houſe, it is not amiſſe; for they will indure houſing better then any other pulſe, yet the ſooner you beat them out of the ſtraw, or thraſh them up, the better it is; for Husbandmen ſuppoſe there is no greater hurt to this kind of graine, then the long keeping it in the ſtraw; for it is of ſuch rankneſſe, that the very ſtraw, and cods breed in it much putrefaction; and I my ſelf obſerved both in *Spain*, and in the neighbouring Iſlands, where is great aboundance of this kind of grain, that they do no ſooner gather it and bring it home, but immediately they thraſh it; nay, ſome thraſh it in the fields upon the lands where it growes, and ſo bring it home, then ſpread it on fair boorded floores in very great heaps, or elſe lay it up in cloſe hutches, or byns, ſuch as wheat and other white grain is to be kept in. If you dry this kind of pulſe in the Sun, or upon a kiln, with a very moderate and ſoft fire, and then lay it up either in a cloſe Garner, or cloſe hutch, it will laſt many years ſound, good, and without corruption. There be other husbandmen which mixe with this grain when it is thraſht, a half part of hot, dry, white ſand, or at leaſt cover the whole heap of pulſe with the ſand, and doe find that it keeps the grain very ſound and good many years together. But to conclude, if you take ſtrong vinegar, and a good quantity of *Laſerpitium*, diſſolve and mixe them very well together, and then having laid your Lentils or Lupins together on

a

a fair boarded floor, in large, broad, and flat heaps, about two foot, or two foot and a half thick; with the vinegar and *Laſerpitium* ſprinkle over all the heap, and not any change of weather froſts, wormes, or other vermine ſhall do them hurt, but they ſhall remain ſound and good as many years as you pleaſe to keep them: there are other Husbandmen that inſtead of this before rehearſed, take only ſweet oyl, and ſprinkle it all over the Grain, and find the ſame vertue and effect, for neither wormes nor other vermine will touch it, nor will the radicall humour thereof at any time waſte or decay, but remain ſtrong, full, and ſound, without any kind of diminiſhing, nor ſhall you find any abatement of it, or ſhrinking in the meaſure, but that which was a buſhell this year will be alſo a buſhell the next year, and as many yeares after as you pleaſe, which is no ſmall profit to the owner.

Whereas on the contrary part, if the grain be either dryed in the Sun, on the kiln, or by the wind, you ſhall hardly have of every ſuch buſhell ſo dryed, three pecks and a halfe againe, which is by computation at every quarter, which is eight buſhells, full one buſhell loſt, and yet this pulſe thus preſerved, as beforeſaid, ſhall be as good for any uſe whatſoever; fit for ſuch corn to be imployed in, as any other dryed grain whatſoever, and yeeld as much every way, & altogether as good meal, and as good meat.

Preſerving of Oates.

Now touching the preſerving and keeping of Oates, it is to be underſtood that of all grain it is leaſt caſuall, becauſe of it ſelfe naturally it breedeth no evill vermine, and is again preſerved and defended with a double husk, whereby neither cold, moyſture, heat, nor dryneſſe, is able ſo ſoon to pierce and hurt it as other grains, which are more thin clad and tender; yet becauſe it is of great and neceſſary uſe both for cattel and pullen, and that neither the husband nor houſwife can well keep houſe without it, you ſhall know, that the beſt way to preſerve it longeſt, is, after it is thraſht, to dry it well either in the Sun or on the Kiln, and then either put it into a cloſe Garner, or cloſe Cask, and it will keep many years ſound and ſweet.

Touching the preſerving of Oat meal, which is the inner kirnell of the Oates, and a grain of moſt ſpeciall uſe in the Hus-

band mans houſe, as in his pottage, in his puddings, and in many other meates neceſſarily uſed for the labouring man; it is an experiment not all together ſo curious as any of the reſt formerly written of, for no Oat-meal can be made, but the Oates muſt be exceedingly well kiln dryed, or elſe the kernel will not part from the Hull, and being dryed, as is fit, that drying is ſufficient to keep and preſerve the Oat-meal divers years.

Provided ever, that preſently after the making of your Oate-meal, you put it into dry cloſe cask, or dry cloſe garners (but cask is better) and ſo that it may remain exceeding dry (for any thaw or moyſture corrupts it) and as near as you can let it have (if it be poſſible) ſome ayre of the fire; for the warmer it ſtands, the better and longer it will laſt, as experience ſheweth.

Preſerving of any meale.

For the preſerving and long keeping of any ſort of meal, there is no better way then firſt to boult and ſearſe him from his bran for the bran is very apt to corrode and putrifie the meal, and to bring it to a faultineſſe or muſtineſſe: then into very ſweet and clean drye caske cloſe and well bound, tread in your meale ſo hard as you can poſſibly tread it, and then head it up cloſe and ſo you may keep it either by land or water ſo long as you pleaſe, and when you have any occaſion to ſpend of it, be ſure to looſen no more of the meal than you preſently uſe, for the faſter and cloſer the meal lyeth together, the longer and ſweeter it will laſt, for it is the gathering of the air that only corrupts it.

And here is alſo to be noted, that you ſhould not preſently as ſoon as your meale is ground, boult it from the bran, but rather let it lye a week or fortnight in the bran, in ſome cloſe bin or trough, and then after that time boult or ſearſe it, and you ſhall find it to afford you in every buſhell, more meal by at leaſt half a peck then if you ſhould preſently boult it as ſoon as it comes from the mill; whence it proceeds, that the cunning and skilfull Baker will ever have a week or fortnights proviſion of meal before hand, which lying ſo long in the bran, payes double intereſt for the continuance.

Now if it fall out ſo, that either by trade or merchandiſe, or other occaſions, you buy any meal by way of tranſportation which is caskt up (as much meal is ſold by the barrel) you ſhall preſently as ſoon as you have bought it (if it be for your own uſe

uſe or expence) break open their heads, and empty the meale upon fair ſheets on a clean floore, and then ſpreading it abroad, let the Sun and Aire paſſe thorough it, which will dry up the ſweat, and if there be any taint of faulkineſſe, take it away, and bring the meal to his firſt ſweetneſſe, and then immediately boult out the coorſe bran, and after, as was before declared, tread it hard into freſh and ſweet cask; and thus you may keep your proviſion of meal all the year long: nay, if need require, two or three yeares, for after the firſt ſweat is taken away, and kindly dryed, there is no doubt to be made of any that ſhall follow after.

Laſtly, touching the preſervation and keeping of all manner of ſmall ſeeds of what nature or quality ſoever they be, whether Hemp, Lime, Rape, Muſtard-Seed, or any other Garden Seede whatſoever, though truly and properly they laſt but one yeare, nor are fit for ſeed or Increaſe after that date expired: yet in as much as they are medicinable after, and a much longer time; therefore you ſhall underſtand that the beſt way to keep them ſafe and ſound, and fitteſt for uſe and profit, is firſt to gather them as ſoon as you perceive them to be ripe, and the weather being bright, clear and dry, then you ſhall dry and wither them in the ſhade, and not in the Sunne, eſpecially upon a plaſtered floore, where the light looketh to the South, and be ſure that as little Sun and moiſture come to them as you can, for both are main enemies; which done, bind them up in bundles without thraſhing, and ſo hang them up, and keep them in their own cods, and they will laſt for all uſes, a full year, and for ſome particular uſes two or three yeares, and in this manner you may alſo preſerve all manner of herbs, weeds, floors, roots, and the barks or rinds of all manner of trees. Preſerving of all ſmal ſeeds.

CHAP. XVIIII.

How to keep Grain, either for tranſportation by Sea, or for uſe in a Town of Warre or Garriſon, from one year to one hundred and twenty.

TO ſpeak of the Graines and pulſes which are meeteſt for the Sea, and their ſeverall uſes.

The uſe of grain and pulſe at Sea. Of Rice and the Uſe.

It is to be underſtood, that the beſt and principalleſt Graine which is indeed both moſt ſweet, moſt freſh, moſt pleaſant in taſte, and moſt long laſting, is Rice, which although it grow not much in our Kingdome, but that we are beholden to our good Neighbours for the trade thereof, yet it is in ſuch plenty where wee fetch it, that wee need neither complain of the ſcarcity nor the coſt, and ſo much rather in that a peck thereof will go further then a buſhel of any other Grain: Of this Rice is made many good and wholſome diſhes, ſome thick ſome thinne, ſome baked, ſome boyled, as thus: If you take a quarter of a pound of Rice, and boyl it in a pottle of water, till it come unto an indifferent thickneſſe, and then put into it a good lump of potted or barrelled butter, and as much ſugar as ſhall ſalt-wiſe ſeaſon it to an indifferent ſweetneſſe, it is a diſh of meate meet for an Emperour at Sea, wholſome, good, and light of diſgeſture, and will be as much as four reaſonable men can well eat at a meal; for the nature of the Rice is ſuch that it will ſwell in boyling, and grow to that bigneſſe, that in an inſtant it will thicken a pottle; ſome uſe the night before they boyl it, to ſteep it in ſo much water, as will onely cover the Rice all over, and then the next day boyl it in a pottle of water or more, and the Rice ſo ſteeped will ſo ſwell, that all the firſt water will be drunk up, and a great deal of leſſe boyling will ſerve to make it ready; and ſure, then this a man cannot find a cheaper way to feed men, ſince one pinte of water, and the fourth part of a quarter of a pound of Rice (which come not to above half a penny at the deareſt reckoning) is a meal ſufficient for a mans eating, having Biſket and Drink proportionably. And this diſh of meat being thus thin boyled, is called Sea-Lob-lolly, and after ſalt feeding is wondrous wholſome and comfortable to any man, whether he be ſick, ſound or diſeaſed, and both abateth infirmities, and haſtneth the healing of all wounds.

There be others, that after they have ſteeped this Rice (as afore ſaid) doe then boyl it in like manner, till it be ſo thick that a ſpoon may ſtand upright in it, and no liquidneſſe of the water perceived; then put a good lump of butter into it, and boyle it with it, and ſtirre it about, and it will make it come moſt clean out of the pot in which it is boyled; then ſeaſon it with Sugar

Sugar, and a little Cynamon, and it will be a diſh of meat right good and delicate, and meet for any man of what quality ſoever, that is worth goodneſſe or preſerving; nor need the quantity exceed the proportion already preſcribed.

Again, if you have meale in the ſhip, if you take of this Rice ſteeped in water, & a little lightly boyled & ſeaſoned with Sugar, Cinamon, and Ginger, and a good quantity of Butter, and then bake it in little paſties, you ſhall find it a moſt delicate, pleaſant and wholſome meet, and that a penny in it ſhall goe further and give better contentment then foure penny worth of Beefe, Bacon, Fiſh, or any other hard ſalt meat; yet I do not wiſh any man of ſhip-board to make this a continuall feeding diſh, for it is both too pleaſant and too ſtrong, and where evacuation of ſome humors are wanting, may breed inconveniences in ſtrong bodyes; but rather to uſe it once a week as a phyſical nouriſher, or for the comfort of ſick and diſeaſed men, whoſe ſtomacks are tane away, or elſe weakned; there may be made alſo of this Rice in time of neceſſity (being ground to a fine meal) an excellent good Bread or Rusk, which is pleaſanter, ſweeter, and much longer laſting then any made wheat: or any other grain whatſoever, beſides many other Seeds which would in this place ſhew but too much curioſity to repeat.

Wheat, and the uſe.

The next Grain unto Rice, which is of eſtimation & great ſervice at Sea, is wheat, of which although there be divers kinds yet they are all alike for the ſerving of this purpoſe; onely the large and thick hul'd wheat (being well dryed) will laſt the longeſt, but the ſmall and fine skin'd wheat yeelds the purer flowre and makes the better meal; now of this wheat is made divers diſhes of meat, for ſome to take it, and bruiſe or beat it in bagges till the upper skin be beaten off, and then having dreſt and winnowed it, boyl it in clean water till it burſt, and grow as thicke as pap, then take it from the fire, and being hot, put it into ſeverall diſhes of wood, or traies, ſo much in every diſh or tray, as may ſerve four men, and ſo let it cool, then give it to the ſick or ſound as you ſhall be directed, and it is an excellent good meat, either cold or elſe hot, and a little butter melted with it, or being again boyled in freſh water, and ſeaſoned with ſalt and a little Sugar, it makes an excellent Grewel, or Loblolly, which is a very ſove-

raign at Sea. Alſo your parched Wheat is a very good food at Sea, and of much requeſt and eſtimation, being ſprinkled with a little ſalt; and of this food a little will ſerve a man at a time, by reaſon that the much ſweetneſſe thereof ſoon filleth and cloyeth the ſtomack, yet it is wondrous light of digeſtion, and breeds great ſtrength, and much good blood, as we dayly find by experience.

Of Oat meale and the uſe.

The next Grain unto this which is to be recommended to the Sea (and which is indeed not any thing inferiour to either of the other going before, both for ſtrength and laſting) is Oat-meal, which by reaſon of the great dryneſſe, and drying thereof, feeles little or no imperfection at the Sea, as being unapt to ſuck or draw in any of the ill or moyſt vapours thereof. Of this Oat-meal is made many good freſh, and comfortable meates at Sea, as Grewell, or Lob-lolly, by boyling it in freſh water, and ſeaſoning it with Salt, and (if you have it continually) ſometimes with Sugar and a few Currants; and a little Mace, which is meat of great ſtrength and goodneſſe, eſpecially for ſuch as are ſick and weak; for it is a great reſtorer of nature, and a purger of the blood; alſo to ſteepe the whole Grotes of Oate-meal a night in water, and then drayning them, and putting it into a bagge, boyl it till the Grots break; then putting it out of the bagge, butter it with butter, and it is an excellent food; as alſo boyling Oate-meale in freſh Water with Barme, or Dregge, and the hinder ends of your Beer-barrels, makes an excellent good pottage, and is of great uſe in all the parts of the Weſt Country, eſpecially, where Marriners or Sea-men live, and are called by the name Drouſſon pottage. Alſo, of Oate-meal is made that meate which is called in the Weſt, Waſhbrew, and may be made at the Sea at your pleaſure, being a meat of that great account amongſt *Devenſhire* and *Cornish* men, that they will allow it to be a meat of ſingular great ſtrength and goodneſſe, and withall ſo light of digeſtion, that a man can very hardly ſurfeit upon it at any time; and I am the rather induced to believe the ſame, becauſe I have obſerved and ſeene many of the

the labouring men of that Country to eat ſuch an unmeaſurable quantity thereof, that in mine eye one mans ſupper would have ſerved a whole family.

But you will ſay, Hunger and labour are ſuch excellent Sauce, that they digeſt any thing.

To that I anſwer, that I have ſeen Gentlemen and Gentlewomen of that Country, of whom as much curioſity hath attended, as is lyable to the City, nay ſuch as have had ſickneſſe their beſt familiar, yet eate of this with great and ſharp appetite, and when health was moſt to be feared, then to boaſt of moſt ſoundneſſe. This *Waſhbrew* is to look upon like Painters Size, or new made Jelly, being nothing but the very heart of the Oat-meal, boyled and drained to that heighth and thickneſſe, having neither Hull nor Bran in it, but the pure Meale and Water, and is to be eaten either with Wine, ſtrong Beere, or Ale, or with clarified Honey, according to mens ſtomacks and abilities. Now this the eaters thereof affirme, that by no meanes it muſt be chewed, but rather ſwallowed by the ſpoonfull whole, becauſe chawing like a pill makes it taſte unpleaſant. There is again another meate to be made of Oat-meal, which is called Girt-brew, and is ſomewhat more coorſe, and leſſe pleaſant than waſh brew, having both the bran and hulls in it, yet it is accounted a food of a very good ſtrength, and exceeding wholſome for mans body, and of my knowledge much uſed and much deſired of all labouring perſons that are acquainted with it: Many other foods there are to be made of Oat-meal, but theſe ſhall be at this time fully ſufficient.

Of Barley and the uſe.

The next Grain to this I account Barley, which may be every way uſed like unto Wheat, either to make Grewel, to be creyed, parcht, or boyled and for Barley for this purpoſe of food, the beſt is French Barley, the next is Barley big, or bear-Barley; and the worſt are the ſpice or battledore Barley, and our common Engliſh barley.

Buck and the uſe.

And as Barley or Wheat, ſo you may uſe your bucke, and your *Indian Siligo*, for they are of like nature, onely they aske a longer time in their beating, ſteeping, and boyling, becauſe they are naturally more hard and more dry, by reaſon of the heate

heat of the Climate in which the beſt grow ; and it is ever to be obſerved for a rule, that the dryer you keep your Corn at Sea, the better it is, and ſweeter and longer laſting.

Of pulſe, and firſt of beans the uſe.

Now having ſhewed the uſe of theſe lighter grains, I will come to Pulſe, and ſhew their uſe and benefit at Sea, or in beſieged towns : and of pulſe, I will firſt ſpeak of Beanes as a principall food, wholſome and ſtrong, and though not ſo fine and light of diſgeſtion as any of the former, yet exceeding hearty and ſound, and a great breeder of good blood : They are for the moſt part to be boyled whole, till ſuch time as they appear ſoft and tender, or begin to break, and then drained from the water are ſerved in trayes, and well ſalted, and ſo eaten ; a pottle whereof is thought a full proportion for four men : and of theſe beanes there are divers kinds as the common Garden bean: or the French bean, which is great, broad and flat, and theſe are the beſt to boyle either with meat or by themſelves, and aſk the leaſt labour, becauſe their outter skinne is moſt tender and the inward ſubſtance moſt apt to be molified and ſoftned: they may alſo be boyled both when they are young and green, and when they are old and dry, and the meat at both times is good and ſavory.

The French bean.

The Kidney bean.

The next bean to theſe are the Kidney bean, which is flatter & leſſer, and neerer the proportion of a Kidney then the French bean is, and this is alſo a Garden bean, and whilſt it is young and green is to be eaten ſallet-wiſe after they are boyled, both the Cod and Bean together, and it is certain, a better ſallet cannot be taſted ; for the Cod or Husk is every way as excellent in taſte as the bean is ; but after they grow old and dry, and that the moyſture is gone out of the cod, then it is meet to thraſh them, and boyl them like the French bean, and they are every way as good meat and as ſoon boyled and as tender.

Common field beans, the uſe.

The next bean to theſe are your common and ordinary field beanes, which having tough and hard skins aske more boyling then the other beanes, and are ſomewhat harder in taſte, yet a good ſound food alſo ; there be many that parch them in the fire, and think them then the beſt meat ; becauſe the fire ſooner breaks the skin and ſoftneth the kirnel ; becauſe they cannot be done ſo abundantly, and therefore are not ſo much in uſe.

Of peaſe and the uſe.

After this great ſort of pulſe, I will now ſpeak of the ſmaller ſort

ſort, as peaſe and their like, and of peaſe there be two kinds the Garden peaſe, and the field peaſe, and for this uſe (albeit both are very good) yet the Garden peaſe are beſt, for they are ſooneſt boyled and are moſt tender, and ſerve for moſt uſe, as for pottage boyling, partching, ſpelting; and of theſe Garden peaſe, there are divers kinds, as white peaſe, French peaſe, Haſtings, Rounſivals and ſuch like, the firſt being the longeſt laſters, the ſecond the pleaſanteſt in taſte, the third the earlieſt and tendereſt, and the laſt largeſt and fulleſt.

Several ſorts of Garden-peaſe.

The field peaſe are only of two kinds, as the white peaſe and the gray peaſe; and they ſeldome make pottage, becauſe they are unapt to break, but are only for boyling and making of leap peaſe, or for parching, yet a good and a ſtrong food: and as we uſe peaſe, ſo in other Countries they uſe Lupins, Lentils, Tares, fetches, and ſuch like ſmaller pulſe, but they are neither ſo good, wholſome, not ſavoury in taſte, being a kind of grain more rank, fulſome, and breeding of ill blood and infection within: theſe in caſes of Sea-fare and war-fare, ought principally to be eſchewed and ſhunned.

Now it reſteth after this long digreſſion of theſe ſeverall graines, and their uſes, with the meates and profits which are made of them, that wee come to the ſafe manner of keeping and preſerving them either by Land or Water, for Victual, or Tranſportation, ſo as they may laſt and indure without ill ſmell or rottenneſſe.

Grain for trade.

And firſt for tranſportation of grain by Sea, it is two wayes to be done, as either in great quantities for trade and the victualling of other nations, or in ſmaller quantity for victualling the men in the Ship, prepared for a long and a tedious voyage.

To tranſport Grain for trade.

For the tranſporting of Grain for trade in great quantities, it is to be intended the voyage is ſeldome long, but from neighbour to neighbour, and therefore commonly they make cloſe decks in the ſhips to receive the grain, fair and even boarded, yet if ſuch decks be matted and lined, both under, and on each ſide, it is much the better; and this matting would be ſtrong and thin. There be ſome which make the decks only of mats, and ſure it is ſweet, but not ſo ſtrong as the boards: therefore the beſt way of tranſportation, is to have ſtrong boarded decks well

matted; and then ſpreading the Corn of a reaſonable thickneſſe, to cover it with matting again, and then to lay corn on it again, and then mats again, that between every reaſonable thickneſs of Grain a mat may lye; the profit whereof is, that when the Corn with his own heat, and the working of the Sea ſhall begin to ſweat, which ſweat, for want of aire to drye it up, would turn to putrifaction.

Then theſe mats thus lying between, will not onely exhale and ſuck up the ſweat, but alſo keep the Corn ſo cool and dry, that no imperfection ſhall come unto it. And here is to be noted, That theſe mats ſhould rather be made of dry white bents, then of flags and bulruſh; for the bent is a firm, dry, criſpe thing, and will not relent or ſweat of it ſelf, but the flag or bulruſh is a ſpungy and ſoft ſubſtance, which is never empty of its own and other moyſtures.

Tranſporting of Victuals.

Now for tranſporting of Grain, for Victualls for the Shippe, which is in much ſmaller quantity, becauſe it is but for the private uſe of a few within the ſhip; the onely beſt and ſafeſt way, is, to take Salt-fiſh barrels or any Caske in which any Salt firſt hath been piled, as Cod, Herrings, Salmon, Sprats, or any other powdred Fiſh; and whilſt the veſſels are ſweet, you ſhall chalk them both within and without with plaiſter, daubing them all over; then into them put your Grain of what kind ſoevet it be, and head them up cloſe, and then ſtow them in ſuch convenient dry place of the ſhip, as you ſhall thinke fit, and queſtionleſſe, if belief may be given to the worthieſt Authors which have writ in this kind, you may thus keep your Grain ſweet, ſound, and in full perfection from one year to an hundred and twenty years; but certainly dayly experience ſhews us, that all kind of Grain thus put up and kept, will remain ſound and ſweet, three, four, and as ſome ſay, ſeven years, for ſo far hath lately been try'd: and what here I ſpeak of ſhipboord, the like may be done in any Town of War or Garriſon, whether beſieged, or not beſieged, or in any other place, where any neceſſity ſhall compell; the proof of this manner of piling or putting up of Grain, ſerveth as well for Land as Sea.

CHAP.

CHAP. XX.

The Inriching of all manner of barren Grounds, and to make it fruitfull to bear Hoppes.

THe Hop of all plants is the moſt tender, and can endure neither too rich a ground, nor yet too poor: for being planted in the firſt, it bringeth forth only leaves and no bells, and in the latter yieldeth neither leaves nor bells.

Abating fertility.

Now in the firſt ſort of Ground, which is fertile and rich, I have nothing to do but only to adviſe how you may allay and leſſen that too much fatneſſe, by mixing your hills well with Chalk, or ſmall ſharp Gravel, if it be a haſſel or mix'd mould: and with good ſtore of red ſand if it be a ſtiff clay, for either of theſe mixtures will in ſhort ſpace abate any fertility.

Increaſing of fertility.

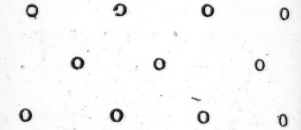
But if the ſoyl be contrary to this, that is extreame barren, then you ſhall ſeek by theſe meanes following to encreaſe the fertility. Firſt when you have taken a view of that barren earth, which you intend to convert to a Hop-garden; you ſhall firſt look to the ſituation thereof, whether it lye high or low, whether it be ſubject to inundations or drownings, or that it lye ſafe and free from any ſuch annoyance: If it be ſubject to great and deep over-flowes, then it is no ground for this purpoſe but if it be onely lyable but to ſome ſmall waſhings, then you may by a few ſmall draines & ſewers caſt through your alleyes, convey away the water to ſome lower grounds, ſo as it may not continue long in the Gardens to do hurt. Beſides, for a further ſafety to the Hop, you ſhall make your hills a great deal bigger and higher, that when any over-flow ſhall happen, the water may not reach above the mid-part of the hill at the moſt, for the root may endure moyſtning, bnt not drowning; and this water thus running through the alleyes, and not drowning the root, will bring to the ground very much fertility. But how ſoever after you have eaſ'd your ground of theſe particular faults, yet the generall fault, which is barrenneſſe, will remain ſtill: therefore, having plotted out your Garden, and fenced it ſufficiently about, you ſhall then caſt up your hills about *Michaelmas*, placing

Choice of Earth.

Draining water.

Caſting of hills and allies.

them in a very orderly manner, and making alleyes between them of four or five foot breadth between hill and hill, ſo as a man may walk at pleaſure through and about them: neither ſhall theſe hills ſtand all directly behind another, for ſo one will overſhade another, which is an annoyance, but according to this Figure, where there is a largneſs of ſpace, and a by-paſſage, through which the Sun may come to give comfort to every Plant.



Theſe hills, if the ground be free from water, may be raiſed about two foot, or a foot and a half high, and of a compaſs anſwerable to the heighth; neither ſo little, that the hill may be ſharp like a Sugar loaf, nor yet ſo bigge, that the hill may lye flat, and ſo retain and hold any rain or wet, which ſhall fall upon it; but you ſhall keep a due middle proportion, making the hill convenient for your Plants and Poales, and ſo as it may ſhoot or put off any wet, or other annoyance, which ſhall fall upon it.

The compoſition of the enriching of hills.

Now theſe hills you ſhall not make intirely, all of one mould, but you ſhall take, as it were, a third part or better thereof, then another part of the earth which lyeth under dung-hills, and the laſt part of Soap-aſhes; and theſe three bodyes you ſhall mixe equally together, and of them compound your Hop-hills: but if this ſeem ſomewhat difficult, and that you cannot find enough for your purpoſe of either of theſe manure, then you may take three parts of the naturall earth, and but onely a fourth part of the other two, and thereof mixe your Hop-hills, and it will be ſufficient to afford you profit enough provided you be able once in three or four years to renew it, for ſo long this will laſt in full ſtrength and power.

Preparing of the allies.

When you have thus made up your hills, you ſhall then pare up with a paring ſhovell all the green ſwarth quite through all your allyes at leaſt four fingers thick, and with the ſwarth ſo pared up, you ſhall cover all your hills almoſt to the top, turning the green ſwarth next unto the earth, ſo as it may rot, for that is an excellent manure alſo: then when your allies are all

thus

thus cleanſed of their ſwarth, you ſhall take good ſtore of braken or ferne, and ſtrow it all over quite thorow all the allies, ſo, that it may lye in a good thickneſs, almoſt to the midſt of the hills, which having all the Winter to rot in, will not only be an exceeding comfort to the hills, and preſerve both them and their plants from many evills, but alſo being ſhovelled up together with the earth in the ſpring time, will be a marvellous ſtrong manure wherewith to repleniſh the hills, and to make them to proſper exceedingly, and to ſave much other coſt and charges as well in manure as in carriage.

The Planting of Hopps.

When your hills are thus inriched, and your allies thus prepared, you ſhall then open your hills in the top, and ſet your plants, that is to ſay, in every hill four plants at the leaſt, being well prepared; and this ſhould be done in the month of *October*, and theſe plants muſt be ſet good and deep in the earth, and covered all over at the leaſt four fingers thick: and if with the earth which covereth theſe plants you mixe Oxe bloed and Lime, it will not onely give great comfort and nouriſhment to the Plants, but alſo defend and ſave the roots from wormes and other vermines, which otherwiſe would ſeeke to deſtroy them.

Poling of Hopps.

After your Garden is thus planted over, you ſhall then let it reſt till the following Spring, and about April, finding the ſmall Twines of your Hopps iſſued out of the Hills and running alongſt the ground, you ſhall then ſet up your Poles, which Poles ſo they be long and ſtreight, may be of any wood you pleaſe, as either Aſh, Elme, Withy, Willow, or Sallow, and in the ſetting up of theſe poales, you ſhall have two very carefull reſpects: Firſt, that in putting in of the poales, and faſtening them with the earth, you do not hurt the Hop roots, which a ſmall careleſneſſe may do, but be ſure to ſet them cleer at the roots: and that you may do it the better, and make your poles to ſtand the faſter, it is good that you have an iron auger, therewith firſt to pierce the ground, and then to put the pole in after, and ſo ram it in hard that it may not ſtirre. The ſecond care is that you place not one poale to overſhaddow another, but that they may ſtand ſo clear one from another, that which way ſoever the Sun ſhall caſt his beames, yet every plant (as it winds about

the pole) may be an equall partaker of the ſame.

This, with a ſmall obſervation in the ſetting up of the poles may eaſily be performed: the number of poales that you ſhall ſet on every hill, muſt be anſwerable to the Syens which ſhall iſſue from the rootes, allowing to every poal two Syens at the leaſt, and not above three at the moſt: theſe Syens (when your hills are poled) you ſhall with your hands twine about their ſeverall poales, and thoſe which are but new peeping from the ground, you ſhall ſo fold among the other Branches, as they may of themſelves run about the poal; and as theſe, ſo alſo all the other twigs, which are any way derived from the main Sien, leaving not any at all to run upon the ground; for that is altogether profitleſs, and to no uſe.

Of weeding Hops.

For the weeding of this barren earth thus made into an Hop-Garden, there is little care to be had: for firſt the ſoap aſhes wherewith the hills are manured, the Oxe blood and the Lime, are ſuch enemies to all manner of weeds, that they will not ſuffer any to grow where they abide: Next the Braken and Fern, which covereth the alleyes is ſuch a poyſoner and ſmotherer of any thing that ſhall grow underneath it, that it will not ſuffer any weed to peep or ſpring up through it; yet if in any eſpeciall place, where neither of theſe defences come, it happen that any weeds do grow, then you ſhall with your beſt care cut them away, or pull them up, and ſo your Garden ſhall remain comely, pleaſant and fruitfull to every proſpect.

CHAP. XII.

A generall computation of men, and cattels labours: what each may do without hurt daily.

Plowing and Sowing.

TO ſpeak generally of all Husbandly works; where the Countrey is tolerable, without any extraordinary difficulty, you ſhall underſtand, that a man may well in ſtiffe grounds, plow an Acre, or an Acre and an half, and in light ſand grounds two or three Acres with one Teame in a day, and he may plough and ſow in ſtiffe ground two Acres and an halfe each day, and in light ground four at leaſt with one Team; and alwayes what he ſoweth, that he may harrow the ſame day alſo.

A

A man may well mow of good and deep loggy meadow, or of rough, uneven meadow, every day one acre ; mowing clean and making a ſmooth boord of well ſtanding and good ſmooth meadow, an acre and a half each day : and of very thin and ſhort graſs, or upland meadow, two acres at the leaſt every day.

Alſo, he may mow of Corn, as Barley and Oats, if it be thick, loggy and beaten down to the earth, making fair work, and not cutting off the heads of the ears, and leaving the ſtraw ſtill growing one acre and a half in a day : but if it be good thick and fair ſtanding corn, then he may mow two acres, or two acres and a half in a day ; but if the corn be ſhort and thin, then he may mow three, and ſometimes four Acres in a day, and not be over-laboured : Alſo of beanes he may mow as much, and of peaſe mixt with beanes, having a hook to follow him, no leſſe ; for they are works in this nature moſt eaſie, and leaſt troubleſome. Mowing.

One man with a Binder may well reap an Acre of Wheat Or Rye in a day, if it be principall good and well ſtanding but if laid or beaten down with weather, then three rood is fully ſufficient for a dayes labour: but if it be thin and upright ſtanding, then he may reap and bind five toods in a day : of ſmall peaſe; Fetches, and ſuch like, a man may well reape two acres every day. Reaping.

Now foraſmuch as it is a cuſtome in divers Countries (and truly is exceeding profitable and worthy imitation) to ſheaſe and bind up both Barley and Oats, as well as Wheat or Rye, and that both ſaveth much Corn, and alſo makes it take a great deal leſſe roome, and that this labour is to be done after the mowers, as the other was after the reapers, by gathering the barley, or Oates up without a ſickle or hook, as it lyes in the ſwath, and ſo binding it in ſheaves, you ſhall underſtand that one man in a day ſhall bind as much as one mower can mow ; and if the man be any thing skilfull in the labour, two binders will bind as much as three mowers can mow. Binding of Barley and Oates.

For the gathering or inning of Grain, no man can proportion the number of loads ; or quantity of ground ſhall dayly be brought home, ſith the journeyes are uncertain, ſome going Gathering in of Grain.

a

a mile, ſome half a mile, and ſome two mile: therefore it is the Husbandmans beſt way, the firſt day to go with his Teame himſelf, and both to obſerve the labour and diſtance of place, and by that to compute what may be done after, without hurt to his cattel, and where he fails of any hope, there to make a ſtrict accoune of the errour; for it is either ignorance or careleſſeneſſe which brings forth miſchances, ſpeaking of husbandry, as over-throwing the Teame, over-loading the Team, breaking neceſſary inſtruments or not reſpecting the wayes and paſſages; any of which may in a day hinder more then halfe a dayes labour.

Ditching. Again, a man may in a day ditch and quickſet of a reaſonable ditch four foot broad, and three foot deep, a rod or a pole a day; allowing ſixteen feet to the rod, & ſo of large meaſure leſs ground, and of leſſe ground larger meaſure, according to the ſufficiency of the fence which you purpoſe to make.

Hedging. A man may hedge alſo in a day, if the hedge be good and ſubſtantial, that is to ſay five foot high, well bound, thick ſtackt, and cloſe laid, two rod in a day, and if the worke be lower or thinner, then double ſo much more according to the former proportion.

Plaſhing. For this plaſhing of hedges, or making a quick fence, if he do it workmanly, and that the grouth be high and well grown, and then he lay it thick, cloſe, and ſtrongly bound in the top, turning the quick downward and inward, to plaſh a rod a day, is as much as any man can well do: but if he plaſh it after the weſt-country faſhion, that is, onely cutting it down, and laying it along cloſe to the ground, ſeeking only thickneſſe, and not much guard or comlineſſe, then he may well plaſh a rod and a half a day without trouble: and ſure in this work is great care and art to be uſed, as well for the preſervation of the quick, as the goodneſſe of the fence, being a thing of worth and validity to every Husbandman.

Delving. Again, a man may delve or dig, as for Garden-mould Hempyard, Flax-yard, or for the ſetting of corn, or for levelling of uneven places, one rod in a day and the ground ſo digged and delved, he may rake, dreſſe, and levell in the ſame day alſo: but if he dig it deep, and trench it, and manure it, as is meet, either

er for Garden, Orchard, or corn ſetting, then to delve halfe a rood in a day, is a very great proportion, becauſe ordinarily to delve, as to receive ordinary ſeeds, requires but one ſpade graft in depth; but extraordinarily to delve, as for inriching and bettering of the ground, and to cleanſe it from ſtones, weeds and other annoyances, will require two ſpades graft, at the leaſt.

Laſtly, a man may thraſh if the corn be good and clean, without ſome extraordinary abuſe or poverty in the grain, in one day four buſhels of wheat or Rye, ſix buſhels of Barly or Oats, and five buſhels of beans or peaſe: but the pulſe muſt then be imagined to be exceeding good, otherwiſe a man ſhall thraſh leſſe of it, then of any other kind of grain; for as when it is well loaden, it yeeldeth plentifully, ſo when it is poor and lightly loaden, it yeeldeth little or nothing, and yet hath not one ſtroke leſſe of the flaile, nor any labour ſaved, more then belongs to the beſt pulſe whatſoever, being ever at leaſt three times turned, and four times beaten over. Thraſhing.

Having thus generally run over (in a ſhort computation) the labours of the Husbandman, I will now briefly as I can, goe over the particular dayes-labour of a Farmer or Plow-man, ſhewing the particular expence of every hour in the day, from his firſt riſing, till his going to bed, as thus for example: we will ſuppoſe it to be after *Chriſtmas*, and about plow-day (which is the firſt ſetting out of the plow) and at what time men either begin to fallow, or to break up Peaſe-earth, which is to lye to baite, according to the cuſtome of the Country; at this time the Plow-man ſhall riſe before four of the clock in the morning, and after thanks given to God for his reſt, & prayer for the ſucceſs of his labours, he ſhall go into his ſtable, or beaſt-houſe, and firſt he ſhall fodder his Cattle, then cleanſe the houſe, and make the booths clean; rub down the cattle, and cleanſe their skins from all filth, then he ſhall curry his Horſes, rub them with cloaths and wiſps, and make both them and the ſtable as clean as may bee, then he ſhall water both his oxen and Horſes, and houſing them again, give them more fodder, and to his Horſe by all means provender; as chaffe and dry peaſe or beans or Oat-huls, peaſe or beanes or clean Oats, or clean Gar badge (which is the hinder ends of any Grain but Rye) with the ſtraw chopt ſmall amongſt it accord- The particular expence of a day.

ding as the ability of the Husbandman is.

And whilſt they are eating their meat, he ſhall make ready his Collers, Hames, Treates, Halters, Mullens, and Plow-geares, ſeeing every thing fit, and in his due place, and to theſe labours I will alſo allow full two houres, that is, from foure of the clock till ſixe; then ſhall he come into breakfaſt, and to that I allow him half an hour, and then another halfe hour to the gearing and yoaking of his Cattle, ſo that at ſeaven of the clock he may ſet forward to his labour, and then he ſhall plough from ſeven of the Clock in the morning, till betwixt two and three in the afternoon; then he ſhall unyoake and bring home his Cattle, and having rubb'd them, dreſt them, and cleanſed away all dirt and filth, he ſhall fodder them and give them meat; then ſhall the ſervants go into their dinner, which allowed halfe an hour, it will then be towards foure of the clock, at which time he ſhall goe to his cattle again, and rubbing them down, and cleanſing their ſtalls, give them more fodder: which done, he ſhall go into the Barn, and provide and make ready fodder of all kinds for the next day, whether it be hay, ſtraw, or blend-fodder, according to the ability of the Husbandman.

This being done and carried into the ſtable, oxe-houſe, or other convenient place, he ſhall then go water his Cattel, and give them more meat, and to his Horſe provender, as before is ſhewed: and by this time it will draw paſt ſix of the clock, at what time he ſhall come into ſupper, and after ſupper, hee ſhall either by the fire ſide mend ſhooes both for himſelfe and their Family, or beat and knock Hemp or Flax, or picke and ſtamp Apples or Crabs, for Cyder or Verdjuyce, or elſe grind malt on the quernes, pick candle ruſhes, or doe ſome Husbandly office within doors till it be full eight a clock: Then ſhal he take his Lanthorn and Candle, and goe ſee his Cattel, and having cleanſed the ſtall and planks, litter them down, look that they be ſafely tyed, and then fodder, and give them meat for all night; then giving God thanks for benefits received that day, let him and the whole houſhold go to their reſt till the next morning.

Now it is to be intended, that there may be in the Houſe-hold

Houſhold more ſervants then one ; and ſo you will demand of me what the reſt of the ſervants ſhall be imployed in, before and after the time of plowing. To this I anſwer, that they may either goe into the barn and thraſh, fill or empty the malt fat, load or unload the Kiln, or any other good and neceſſary worke that is about the yard ; and after they come from plowing, ſome may go into the Barn and thraſh, ſome hedge, ditch, ſtop gaps in broken Fences, digge in the Orchard or Garden, or any other Out-work which is needfull to bee done, and which about the Husbandman is never wanting, eſpecially one muſt have a care every night to look to the mending or ſharpening of the Plough-irons, and the repairing of the Plough and Plough gears, if any be out of order, for to defer them till the morrow, were the loſſe of a dayes work, and an ill poynt of Husbandry,

Particular labors of Cattel.

Now for the particular labours of Cattel, though it be already incluſively ſpoken of in that which is gone before, where I ſhew you how much a man may conveniently plough in a day with one Team or Draught of Cattell, yet for further ſatisfaction you ſhall underſtand that in your Cattell there are many things to be obſerved, as the kind, the number, and the ſoyl they labour in. For the kind which are Oxen, Bulls, or Horſes, the beſt for the draught, are Oxen, and the reaſons I have ſhewed in my former Works : The next are Horſes ; and the worſt, Bulls ; becauſe they are moſt troubleſome : the number fit for the plough, is eight, ſix, or four ; for the cart, five or four ; and for the Waine, never under ſix , except in leading home of harveſt, where loading eaſily, four very good Oxen are ſufficient ; for the ſoyl, if it be of the toughеſt and deepeſt earth, eight beaſts can doe no more but fallow or breake up Peaſe earth, no, nor fewer ſtirre, if the ſeaſon grow hard and dry ; for ſoyling, winter rigging and ſeed furrow, ſixe beaſts may diſpatch that labour : if the ſoyl be mix'd and haſſel, then ſixe may fallow and ſow Peaſe, and four doe every other ordure : but if it be light and eaſie ſand, then foure is enow in every ſeaſon. For the quantity of their worke, an Oxe plough may not doe ſo much as a Horſe-plough, becauſe they are not ſo ſwift, nor may be driven out of their pace, be-

ing more apt to ſurfeit then Horſes be, ſo that for an Oxe-plough to do an Acre, and a Horſe-plow an Acre and a Rood, or an Acre and an half in good ground, is work fully ſufficient.

CHAP. XXII.

The applying of Husbandry to the ſeveral Countries of this Kingdome, wherein is ſhewed the office and duty of the Carter or Plow-man.

IT is to be underſtood, that Husbandry doth vary according to the Nature and Clymates of Countries: not one rule obſerved in all places, but according as the earth, the aire, the much or little heat, moiſture or cold doth increaſe or diminiſh, ſo muſt the skilfull Husbandman alter his ſeaſons, labours, and inſtruments; for in ſtiff Clayes, as are all the fruitful Vales of this Kingdome (of which I have named moſt part in a Chapter before) as alſo Huntington-ſhire, Bedford-ſhire, Cambridge-ſhire, and many other of like nature, all manner of arable works muſt be begun betimes in the year, and the Ploughes and inſtruments muſt be of large ſize and ſtrong timber, and the labour great and painfull: ſo alſo in mixt ſoyls that are good and fruitfull as Northampton-ſhire, Hartford-ſhire, moſt part of Kent, Eſſex, Bark-ſhire, and Counties of like nature, all arable toiles would begin at latter ſeaſons, and the Ploughes and Inſtruments would be of middle ſize, and indifferent timbers, and the labour ſomewhat leſſe then the other: but the light ſandy grounds which have alſo a certain natural fruitfulneſſe in them: as in Norfolk, Suffolk, moſt part of Lincoln-ſhire, Hamp-ſhire, Surry, and Countries of that nature, all arable toyles would begin at the lateſt ſeaſons, and the Ploughes and Inſtruments would be of the ſmalleſt and lighteſt ſize, and of the leaſt timber, and the labour of all other is eaſieſt.

Laſtly, for the barren unfruitfull earth (of which only I have written in this Book (as is Devon-ſhire, Cornwall, many parts of Wales, Darbiſhire, Lancaſhire, Cheſhire, Yorkſhire, and many other like, or worſe than they: the arable toiles would have a fit ſeaſon of the year, according to the temperatneſſe of the year, which if it happen early, then you muſt begin your labours at latter ſeaſons

ſons, and for your Plough and Inſtruments, they muſt not keep any certaine proportion, but be framed ever according to the ground, the ſtronger and ſtiffer ground having ever the ſtrong and large Plough with Inſtruments of like kind, and the lighter earth a Plow and Inſtruments of more eaſie ſubſtance: as for the labour it muſt be ſuch, and no other, then that which hath been already declared in this book.

And hence it comes that the office and duty of every skilfull Plough-man, or Carter is firſt to look to the nature of the earth, next to the ſeaſons of the year, then to the cuſtomes and faſhions of the place wherein he liveth; which cuſtomes although they beheld as ſecond natures amongſt us, and that the beſt reaſons of the beſt work-men commonly are, that thus I do, becauſe thus they do; yet would I with no man to bind himſelf more ſtrictly to cuſtome, then the diſcourſe of reaſon ſhall be his warrant, and as I would not have him to prejudicate in his own opinion, ſo I would not have him too great a ſlave to other mens traditi-on, but ſtanding upon the ground of reaſon made good by experience, I would ever have him profit in his own judgement. The Carters office.

Now the further office and duty of the Husbandman, is, with great care and diligence, to reſpect in what ſort of faſhion to plough his ground; for although I have in the former Chapter ſhewed how he ſhould lay his furrows, what depth he ſhall plow them, and how hee ſhall bee able to raiſe and gaine the greateſt ſtore of mould, yet is there alſo another conſideration to be had no leſſe profitable to the Husbandman then any of the former; and that is, how to lay your Land beſt for your own profit and eaſe, as alſo the eaſe of your Cattel which ſhall draw within your draught as thus for inſtance: If your arable Land ſhall lye againſt the ſide of any ſteep hill (as for the moſt part all barren earths do) if then you ſhall plow ſuch Land directly againſt the hill, beginning below and ſo aſcending ſtreight upright, and ſo down again and up again, this very labour and toyling againſt the hill will breed ſuch a bitter wearineſſe to the cattel, and ſuch a diſcouragement, that you ſhall not be able to compaſs one halfe part of your labour, beſides the danger of over-heating and ſurfeiting of your beaſts, whence will ſpring

many mortal diſeaſes : Therefore when you ſhall plough any ſuch ground, be ſure ever to plough it ſide-wayes over thwart the hill, where your beaſts may tread on the level ground and never directly up and down, ſo ſhall the compoſt and manure which you lay upon the ground not be ſo ſoon waſh'd away from the upper part of the ground, becauſe the furrows not lying ſtreight down in an even deſcent, but turned croſſe-wayes upward againſt the hill, it muſt neceſſarily hold the ſoyl within it, and not let it waſh away.

Of Cattell for draught.

Again, it is the office of every good plowman to know what Cattel are meeteſt for his draught, as whether Oxen or Horſe, or both Oxen and Horſe : wherein is to be underſtood, that although of all draughts whatſoever within this Kingdome, there is none ſo good to plow withall, both in reſpect of the ſtrength, ſtability, indurance, and fitneſſe for labour, as the Oxen are; in whom there is ſeldome or never any loſſe : becauſe whenſoever his ſervice faileth in the draught, his fleſh will be of good price in the ſhambles ; yet notwithſtanding in this caſe a man muſt neceſſarily bind himſelf much to the cuſtome of the Country, and faſhion of his neighbours ; for if you ſhall live in a place where fuel is ſcarce & far to be fetch'd, as commonly it is in all barren Countrys, which, for the moſt part are ſtony Champaines, or cold mountains ; and your neighbours as well for the ſpeed of their journies, as for length keep Horſe-draughts : in this caſe alſo you muſt do the like, or elſe you ſhall want their Company in your journey, which is both diſcomfort and diſprofit, if any miſchance or caſualty ſhall happen, or being inforc'd to drive your Oxen as faſt as they do their Horſe, you ſhall not onely over-heat, tire, bruiſe, and ſpoyl them ; but alſo make them utterly unfit either for feeding or labour, and therefore if your Eſtate be mean, and that you have no more but what neceſſity requires, then you ſhall ſort your Plow or Teame according to the faſhion of your Country, and the uſe of your neighbours : but if God have bleſt you with plenty, then it ſhall not be amiſſe for you to have ever an Oxe draught or two, to till your Land ; and a Horſe draught to do all your forraign abroad buſineſſes : ſo ſhall your work at home ever go conſtantly forward, and your outward neceſſary Proviſions be never wanting. Now

for

for the mixture of Oxen and Horſes together, it falleth out oftentimes that the Plowman of force muſt be provided with Cattle of both kind, as if he happen to live in a rocky Country, where the ſteepineſſe of the hils, and narrowneſſe of the wayes, wil neither ſuffer Cart, Wain, nor Tumbrel to paſs; in this caſe you ſhal keep Oxen for the plow, to till the ground with, and horſes to carry pots and hooks: the firſt to carry forth your manure, and the other to bring home your hay and Corn harveſt, your fuel and other proviſions, which are needfull for your family, as they do both in Cornwal, and other mountainous Countries, where Carts and Wains, and ſuch like draught, have no poſſible paſſage.

Again, it is the office and duty of every good Plow-man to know his ſeveral labours, for every ſeveral month through the whole year; whereby no day nor hour may be miſpent, but every time and ſeaſon employed according at his nature requireth: as thus for example.

In the month of January the painfull Plowman if he live in fertile and good ſoyles, as among rich, ſimple clayes, he ſhall firſt plow up his Peaſe earth, becauſe it muſt lye to take bait before it be ſown; but if he live in fruitfull well mixt ſoyles, then in this month he ſhall begin to fallow the field he will lay to reſt the year following: but if he live upon hard barren earths (of which chiefly I write) then in this month he ſhall water his meadows & paſture grounds, and he ſhal drain and make dry his arable grounds, eſpecialy where he intends to ſow Peaſe, Oates, or Barley the ſeed time following. Alſo he ſhall ſtub up all ſuch rough grounds as he intends to ſow the year following. You ſhall meaſure and trim up your Garden moulds, and you ſhall comfort with manure ſand, or lyme, or all three mixt together, the roots of all barren fruit-trees: and alſo cut down all ſuch timber; only there will be loſſe in the bark, for the time is ſomewhat too early for it to riſe. Laſtly, you may tranſplant all manner Fruit-trees the weather being open, and the ground eaſie; you may rear Calves, remove Bees, and for your own health keep your body warme let good dyet and wholeſome be your Phyſitian, and rather with exerciſe then ſawce encreaſe your appetite. January.

In

February. In the month of *February*, either ſet or ſow all ſorts of Beanes, Peaſe, and other Pulſe, and the ſtiffer your ground is the ſooner begin your work; prepare your Garden-mould, and make it eaſie and tender; prune and trim all ſorts of Fruit-trees from moſſe, cankers, and all ſuperfluous branches; plaſh your hedges, and lay your quick-ſets cloſe and intire together; plant Roſes, Gooſeberries, and any fruit that grows upon little buſhes; graft at the latter end of this month upon young and tender ſtocks, but by all means overlade not the ſtocks.

Laſtly for your health, take heed of cold, forbear meats that are ſlimy and phlegmatick, and if need require either purge, bathe, or bleed as Art ſhall direct you.

March. In the month of *March*, make an end of ſowing of all ſorts of ſmall Pulſe and begin to ſow Oats, Barley, and Rye, which is called March-rye; graft all ſorts of Fruit-trees, and with young Plants and Syens repleniſh your Nurſery, cover the rootes of all trees that are bared, and with fat earth lay them cloſe and warm: if any Tree do grow barren, bore holes in the root, and drive hard wedges or pins of Oak-wood therein, and that will bring fruitfulneſſe: tranſplant all ſorts of ſummer flowres, and give new comfort of manure and earth to all early out-landiſh flowres, eſpecially to the *Grown Emperiall Tulips*, *Hyacinth*, and *Narciſſus* of all ſhapes and colours, cut down under wood, for fuell and fencing, and look well to your Ewes, for then is the principall time of yeaning.

And laſtly, bathe often, and bleed but upon extreamity, purge not without good counſel, and let your dyet be cool and temperate.

April. In the month of *April*, finiſh up all your Barley ſeed, and begin to ſow your Hemp and Flax: ſow your Gorden ſeeds, and plant all ſorts of hearbs; finiſh grafting in the ſtock; but begin your principal inoculation for then the Rind is moſt plyant and gentle: open your Hives and give bees free liberty, and leave to ſuccour them with food, and let them labour for their living.

Now cut down all great Oak-timber, for now the bark will riſe, and be in ſeaſon for the Tanners; now ſcour your ditches, and gather ſuch manure as you make in the ſtreets and high wayes, into great heaps together; lay your meadows, ſleight your corn-

corn-ground, gather away ſtones; repair your high wayes, Set Oziers and Willows, and caſt up the banks and mines of all decayed fences.

Laſtly, for your health, either purge bathe or bleed, as you ſhall have occaſion, and uſe all wholſome recreation: for than moderate exerciſe in this month, there is no better Phyſicke.

In the month of *May*, ſow Barley upon all light ſands and burning grounds, ſo likewiſe doe your Hemp or Flax and alſo all ſorts of tender garden ſeeds, as are Cucumbers and Mellons, and all kind of ſweet ſmelling hearbs and flowres; Fallow your ſtiffe clayes; ſummer ſtirre your mixt earth, and ſoyle all light and looſe hot ſands: prepare all barren earth for Wheat and Rye, burn bait, ſtub gorſſe or Furs, and root out Broome and Fern; begin to fold your ſheep, lead forth manure, and bring home fuell and fencing, weed your winter corn, follow your common works and put all ſorts of graſſe either in paſture or teather: put your Mares to the horſe, let nothing be wanting to furniſh the Dairy: and now put off all your Winter fed Cattell, for now they are ſcarceſt and deareſt, put young ſteares and dry kine now to feed at freſh graſſe, and away with all peaſe-fed ſheep; for the ſweetneſſe of graſſe mutton will pull down their prices. May.

Laſtly, for your health, uſe drinke that will coole and purge the blood, and all other ſuch phyſical precepts, as true Art ſhall preſcribe you: but beware of Mountebanks and old wives tales, the latter hath no ground, and the other no truth, but apparent coſenage.

In the month of *June*, carry ſand, marle, lime; and manure of what kind ſoever to your land; bring home your coales and other neceſſary fuell fetcht far off; ſhear early fat ſheep; ſow all ſorts of tender hearbs, cut rank low meadows; make the firſt return of your fat cattel, gather early ſummer fruits; diſtil all ſorts of plants and hearbs whatſoever. June.

And laſtly, for your health; uſe much exerciſe, thin dyet, and chaſt thoughts.

In the month of *July*, apply your hay harveſt; for a day ſtackt is many pounds loſt; chiefly when the weather is uncon- July.

ſtant, ſhear all manner of field ſheep, Summer-ſtirre rich ſtiffe grounds, foyl all mixt earths, and latter foyl all looſe hot ſands. Let hearbs you would preſerve, now run to ſeed; cut off the ſtalks and out landiſh flowres, and cover the rootes with new earth ſo well mixt with manure as may be; ſell all ſuch Lambs as you feed for the butcher, and ſtill lead forth ſand, marl, lime, and other manure; fence up your copſes, graze your elder under-woods and bring home all your field timber.

And laſtly for your health, abſtain from all phyſick, bleed not but upon violent occaſion, and neither meddle with Wine, Women, nor other wantonneſs.

August. In the month of *August*, apply your Corn Harveſt, ſheare down your Wheat and Rye, mow your Barley and Oates, and make the ſecond return of your fat ſheep and cattle; gather all your Summer greater fruit, Plumbs, Apples, and Peares; in Summer make your ſweet-perry, and Cydar; Set ſlips, and ſyens of all ſorts of Gilly-flowres, and other flowers, and tranſplant them that were ſet the ſpring before, and at the end of this month begin to winter-rig all fruitfull foyles whatſoever. Geld your lambs, carry manure from your dove-coates, and put your ſwine to the early or firſt maſt. And laſtly for your health, ſhun feaſts and banquets. Let phyſick alone, hate wine, and onely take delight in drinks that are coole and temperate.

September. In the month of *September*, reap your peaſe, beanes, and all other pulſe, making a final end of your harveſt: now beſtow upon your wheat Land your principal manure, and now ſow your Wheat and Rye, both in rich and in barren climates; now put your ſwine to maſt, of all hands, gather your winter fruit, and make ſale of your woole, and other ſummer commodities; now put off thoſe ſtocks or bees, you mean to ſell, or take for your own uſe, cloſe thatch and daube warm all the ſurviving hives, and look that no Drone, Mice, or other Vermine be in or about them; now thatch your ſtacks and reeks, thraſh your ſeed Rye and Wheat, and make an end with your cart of all forraign journeyes.

Laſtly for your health, in this month, uſe phyſick, but moderately; forbear fruits that are too pleaſant or rotten, and as death ſhun ryot and ſurfeit.

In

In the month of October: finiſh your wheat ſeed, and ſcour ditches and ponds, plaſh and lay hedges and quickſet, tranſplant remove or Set all manner of fruit-trees, of what nature or quality ſoever; mak: your Winter Cider and Perry, ſpare your private paſtures, and eat up your corn fields and commons, and now make an end of winter ridging, draw furrows to drain, and keep dry your new ſown corn, follow hard the making of your malt rear all ſuch calves as ſhal fall, and wean thoſe foales from your draught mares, which the ſpring before were foaled: now ſell all ſuch ſheep as you will not winter, give over folding, and ſeperate Lambs from the Ewes, which you purpoſe to keep for your own ſtock. October.

Laſtly, for your health, refuſe not any needfull phyſick at the hands of the learned phyſitian, uſe all moderate ſports, for any thing now is good, which reviveth the ſpirits.

In the month of November, you may ſow either Wheat or Rye in exceeding hot ſoyls, you may then remove all ſorts of fruit trees, and plant great trees, either for ſhelter or ſhadow: now cut down all ſorts of Timber, for plows, carts, axeltrees, naves, harrows, and other husbandly offices; make now the laſt returne of your graſſe fed cattle, bring your ſwine from the maſt, and feed them for ſlaughter, rear what calves ſo ever fall, and break up all ſuch Hemp and Flax, as you intend to ſpin in the winter ſeaſon. November.

Laſtly, for your health, eat good wholſome and ſtrong meats very well ſpiced and dreſt, free from rawneſſe; drink ſweet wines and for diſgeſtion ever before cheeſe prefer good and moderate exerciſe.

In the month of December, put your ſheep and ſwine to the peaſe Reeks, and fat them for the ſlaughter and market; now kill your ſmall porks, and large bacons, lop hedges and trees, ſaw out your timber for building, and lay it to ſeaſon; and if your land be exceeding ſtiffe, and riſe up in an extraordinary furrow, then in this month begin to plow up that ground whereon you mean to ſow clean beans only: now cover your dainty fruit trees over with canvaſe, and hide all your beſt flowres from froſt and ſtormes, with rotten old horſe litter; now drain all your corn fields, and as occaſion ſhall ſerve, ſo water and keep moyſt December.

your meadows: now become the fowler, with Piece, Nets, and all manner of Engines; for in this month no fowl is out of ſeaſon, now fiſh for the Carp, the Bream, Pike, Tench, Barbel, Peal and Salmon.

And laſtly, for your health, eat meats that are hot and nouriſhing, drink good wine that is neat, ſprightly and luſty, keep thy body well clad and thy houſe warm, forſake whatſoever is flegmatick, and baniſh all care from thy heart, for nothing is more unwholſom then a troubled ſpirit.

Many other obſervations belong unto the office of our skilfull Plow-man or Farmer, but ſince they may be imagined too curious, too needleſſe, or too tedious, I will ſtay my pen with theſe already rehearſed, and think to have written ſufficiently, touching the application of grounds, and office of the Plow-man.

The end of Markham's *farewell to Huſbandry.*

The

The Table and generall Contents of the whole Book.

CHAP. I.

THE Nature of Grounds in general. pag. 1.
The knowledge of barren grounds. p.2.

CHAP. II.

The Ordering, tilling, and dreſſing of all barren clayes, ſimple or compound. p. 3.
The firſt inriching of barren grounds. p. 3.
The manner of plowing. p. 4.
The hacking, ſanding, and liming of grounds. p.4. 5
Additions. *The uſe and profit of lime.* p. 5.
The manuring of grounds. p.6
The times for all labours p 6.
The ſecond plowing. p. 7.
The ſecond hacking. p 7.
The firſt harrowing p.7.
Of ſowing the ſeed. p.8.
The ſecond harrowing. ibid.
Faults in the earth. ibid.
The clotting of grounds. p. 9.
Another manner of clotting. p.10
Weeding. p. 11.
An objection and anſwer. p.12
The ordering of earths where ſand wanteth. ibid
Sowing of Salt. pag.13
The excellency of ſalt. ibid.
Of ſteeping ſeed in brine. p.13.

CHAP. III.

Of the ordering, tilling, and dreſſing of all rough barren clay, ſimple or compound, being over-run with Gorſe, Broom, or, &c. p.14
The deſtroying of weeds. p.16.
Burning of Bait. ibid.
The breaking of the burnt earth. ibid.
The cauſes of unfruitfulneſſe. 17.
An excellent manure. ibid
The plowing. ibid
Of divers manures. 18.
Of weeding. ibid.
The time of weeding. ibid.
The gathering of ſtones. p.19

CHAP. IV.

Of the ordering, tilling, and dreſſing of barren clayes, that are over-run with Whins. p.20
What whins are. ibid.
Paring of grounds. p.26.
Making of Baites. ibid
Breaking of Baits p.22.
Plowing. ibid.
Har-

Harrowing, weeding, & the profits p. 24

CHAP. 5.

Of ordering, tilling, & dreſſing all barren clayes which are over-run with Ling and Heath p. 24

Deſtroying of Heath p. 25
Another burning of baite p. 26
Of weeding. p. 27

CHAP. 6.

Of the ordering, trimming, and dreſſing of all barren Sands, bearing nothing but moſſie graſs p. 28

Of Plowing. p. 30
Of Marling p. 31
What Marl is ibid
Additions ibid
Of Chalk and the uſe p. 33
The profit p. 35

CHAP. 7.

Of the plowing, tilling, and dreſſing of all barren Sands, that are over-run with Braken, Fern, or Heath p. 35
Of ſanding and liming p. 36
Of plowing and ſowing p. 37
Labours after ſowing ibid
Of weeding p. 38

CHAP. 8.

The plowing, tilling, and ordering of all barren Sands, laden with twitch, and wild Bryar. p 38

The deſtroying of twitch and bryar ibid

Of Manures p. 39
Of harrowing, and other labours. ibid
Of weeding p. 40

CHAP. 9.

The plowing, tilling, and ordering of ſands laden with mooriſh ſtincking graſs p. 41
Grounds for fiſh-ponds p. 42
The drayning of wet grounds p. 43
The harrowing p. 44
The weeding p. 45
Additions

CHAP. 10.

A general way for the enriching of any arable grounds, either, Clay or Sand, with leſſe charge than formerly p. 45
Steeping of Seed corn, or any Puſſe p. 46
Shavings of horn ibid
Hoofs of Cattel ibid
Of Woad p. 47
The enritching of ordinary Manure ibid
Additions

CHAP. 11.

How to enrich (for corn) any barren rough woody ground being newly ſtubbed up. p. 49
Additions.

CHAP. 12.

The manner of reducing, and bringing unto their firſt perfection, all ſorts of Grounds which have beene over-flowed or ſpoyled by ſalt water, or Sea-breach, either arable, or paſture, as alſo the enriching or bet-

batte ing of the ſame p 50

Additions CHAP. 13.

Another way to enrich barren paſture, or meadow without the help of water. p. 57

CHAP. 14.

How to enrich or make the moſt barren ſoyl to beare excellent good paſture or meadow, p 62

Of watering grounds p.64

The helps in watering ibid

When and how to water ibid

The beſt ſeaſon for watering p.65

CHAP. 15.

The enriching barren grounds, for Hemp or Flax p 66

Black clay for Hemp. p.67

The making ill earth bear Hemp p.68

The weeding p.69

CHAP. 16.

The manner of ſtacking all kind of Grain with leaſt loſſe 70

CHAP. 17.

The diſeaſes and imperfections which happen to all manner of Grain p.72

Crowes, Pidgeons, or Birds and the cure p.73

Additions. p.74

Of Piſmires and Dores, with the Cure p. 75, 76.

Of field Rats and Mice, and the cure p.77

Of worms and the cure p. 78

Of Rye not to be wet ibid

Of Snailes p. 79

Of Graſhoppers ibid

Of Moals, and the cure p. 80

Offences from the influence of Heaven p.81

Of ſmuttineſs or mildew, & the cure ibid

Additions. ibid

Of Hail and the cure ibid

Of Lightning, Froſts, Miſts, Fogs, and blaſtings, and the cure 82, 83.

Corn reapt wet, and the cure 83

Of waſht corn p. 83

To know waſht Corn p. 84

CHAP. 18.

How to keep all manner of Graine threſht or unthreſt the longeſt time, and how to preſerve it, &c. p. 86

Of Garners p. 87

Of Hutches and their uſes p. 88

To preſerve wheat p.89

To preſerve Rye p.93

To preſerve Beans ibid

To preſerve Peaſe or Fetches 95

To preſerve Lentiles or Lupins 98

To preſerve Oats ibid

To preſerve Oat-meal p. 99

To preſerve any meal p.100

The preſerving of all ſmal ſeeds. p.101

CHAP. 19.

How to keep Grain either for tranſportation or, &c. p.101

The uſe of Grain p.102

Of Pulſe ibid

Of Rice and the uſe ibid

Of

Of Wheat and the use p.103
Of Oat-meal and the use 104
Of Barley and the use p.105
Of Buck and the use p. ibid
Of Pulse and the use p.106
Of French beans ibid
Of the Kidney-bean ibid
Of common field beanes ibid
Of Pease and their use ibid
Several sorts of pease 107
To transport Grain ibid

Additions CHAP. 20.

The enriching of barren Grounds, and to make it fruitfull to bear Hopps. 109
Abating and encreasing of fertility ibid
Choice of grounds ibid
Casting the hills p. 110
Preparing the Allies, and Planting the Hopps. ibid

CHAP. 21.

A general computation of men and cattels labours, &c. 112
Of Plowing, Sowing, and Mowing ibid
Of Reaping and gathering Graine p. 113
Of Ditching, Hedging, Plashing p. 114
Of Delving and thrashing. 114
The particular expences of a Day. ibid
The particular labour of Cattell p. 117

CHAP. 22.

The applying of Husbandry, to the several Countries. p. 118
The Carters office p. 119
Of Cattel for the Draught 121
The several labours of the several Months. p.121. to 126.

ADDITION.

An excellent way to take Moals, and to preserve good Ground from such annoyance.

PUt Garlick, Onions, or Leeks, into the mouths of the holes, and they will come out quickly as amazed.



FINIS.

A NEW

ORCHARD AND GARDEN:

OR,

The beſt way for Planting, Grafting, and to make any Ground good, for a rich Orchard: Particularly in the North, and Generally for the whole Common-Wealth, as in Nature, Reaſon, Situation, and all Probability, may and doth appear.

With the Country Houſ-wifes Garden for Herbs of Common uſe: Their Virtues, Seaſons, Profits, Ornaments, variety of Knots, Models for Trees, and Plots, for the beſt ordering of Grounds and Walks.

AS ALSO

The Husbandry of Bees, with their ſeveral Uſes and Annoyances:

All being the experience of Forty and eight yeeres labour, and now the third time corrected and much enlarged, by William Lawſon.

Whereunto is newly added the Art of Propagating Plants; with the true Ordering of all manner of Fruits, in their gathering: Carrying home, and Preſervation.

Skill and paines, bring fruitfull gaines.



Nemo ſibi natus.

London, Printed by *William Wilſon*, for *George Sawbridge*, at the Bible on Ludgate-Hill, neere *Fleet-Bridge*. 1660.

ob.: 1602.

To the Right Worſhipfull *Sir HENRY BELLOSES*, Knight and Baronet.

Worthy Sir,

WHen in many years by long experience I had furniſhed this my Northerne Orchard and Country Garden with needfull Plants and uſefull hearbs, I did impart the view thereof to my Friends, who reſorted to me to confer in matters of that nature; they did ſee it, and ſeeing it, deſired it; and I muſt not deny now the publiſhing of it, (which then I allotted to my private delight) for the publick profit of others. Wherefore though I could plead Cuſtome, the ordinary excuſe of all writers, to chuſe a Patron and Protector of their works, and ſo ſhroud my ſelf from ſcandall under your ho-

nourable favour; yet have I certain reaſons to excuſe this my preſumption: Firſt, the many courteſies you have vouchſafed me. Secondly, your delightfull skill in matters of this nature. Thirdly, the profit which I received from your learned diſcourſe of Fruit-trees. Fourthly, your animating and aſſiſting of others to ſuch indeavours. Laſt of all, the rare work of your own in this kind: All which to publiſh under your protection, I have adventured (as you ſee). Vouchſafe it therefore entertainment, I pray you, and I hope you ſhall find it not the unprofitableſt ſervant of your retinue. For when your ſerious employments are over-paſſed, it may interpoſe ſome commodity, and raiſe you contentment out of variety.

Your Worſhips

moſt bounden

WILLIAM LAWSON.

THE

THE PREFACE,
To all well minded.

ART hath her first original out of Experience, which therefore is called The School Mistriss of fools, because she teacheth infallibly, and plainely, as drawing her knowledge out of the course of Nature, (which never fails in the general) by the senses, feelingly apprehending, and comparing, (with the help of the Mind) the Works of Nature; and as in all other things naturall, so especially in Trees. For what is Art more than a provident and skilfull Correctrix of the faults of Nature in particular works, apprehended by the Senses? As when good ground naturally brings forth Thistles, trees stand too thick, or too thin, or disorderly, or (without dressing) put forth unprofitable Suckers, and such like; all which and a thousand more, art reformeth, being taught by Experience; and therefore must we count that art the surest, that stands upon Experiment all Rules, gathered by the Rule of Reason (not conceit) of all other Rules the surest.

Whereupon have I, of my meer and sole Experience, without respect to any former written Treatise, gathered these Rules, and set them down in writing, not daring to hide the least talent given me of my Lord and Master in Heaven. Neither is this injurious to any, though i differ from the Common opinion in divers points, to make it known to others, what grod I have found out, in this faculty by long tryall and experience. I confesse freely my want of curious skill in the art of planting: and I admire and praise Plinie, Aristotle, Virgil, Cicero, and

many others, for wit and judgment in this kind, and leave them to their times, manner, and ſeveral Countries.

I am not determined (neither can I worthily) to ſet forth the praiſes of this art; how ſome, and not a few, even of the beſt, have accounted it a chiefe part of earthly happineſs, to have fair and pleaſant Orchards, as in Heſperia *and* Theſſaly; *how all with one conſent agree, that it is a chief part of Huſbandry, (as* Tully de Senectute*) and Huſbandry maintains the world: how antient, how profitable, how pleaſant it is; how many ſecrets of nature it doth contain, how loved, how much practiſed in the beſt places, and of the beſt. This hath beene done by many: I only aime at the common good. I delight not in curious conceits, as planting and graffing with the Roots upwards, inoculating Roſes on Thorns, and ſuch like; although I have heard of divers, proved ſome, and read of more.*

The Stationer hath (as being moſt deſirous, with me, to further the common good) beſtowed much coſt and care in having the Knots and Models by the beſt Artizan cut in great variety, that nothing might be any way wanting to ſatisfie the curious deſire of thoſe that would make uſe of this Book.

And I ſhew a plain and ſure way of planting, which I have found good by 48 yeeres (and more) experience in the North part of England. *I prejudicate and envie none; wiſhing yet all to abſtain from maligning that good (to them unknown) which is well intended. Farewell.*

Thine for thy good,

W. L.

THE

THE BEST, SVRE AND READIEST WAY TO MAKE A Good *Orchard* and *Garden.*

CHAP. I.

Of the Gardener and his Wages.

WHoſoever deſireth and indevoureth to have a pleaſant and profitable Orchard, muſt (if he be able) provide himſelf of a fruiterer, Religious, Honeſt, Skilfull in that faculty, and therewithall painefull. By Religious I meane (becauſe many think Religion but a Faſhion or Cuſtom to goe to Church) maintaining, and cheriſhing things religious: as Schools of Learning, Churches, Tythes, Church goods and rights, and above all things, Gods word, and the Preachers thereof, ſo much as he is able, practiſing prayers, comfortable conferences, mutual inſtruction to edifie, almes, and other works of charity, and all out of a good conſcience. Religious.

Honeſty in a Gardener, will grace your Garden, and all your houſe, and help to ſtay unbridled Serving men, giving offence to none, nor calling your Name into Queſtion by diſhoneſt acts, nor infecting your family by evill counſel or example. For there is no plague ſo infectious as popery and knavery, he will not purloin your profit, nor hinder your pleaſures. Honeſt.

Concerning his skill, he muſt not be a Sciolift, to make a ſhew or take in hand that which he cannot perform, eſpecially in ſo weighty a thing as an Orchard: than the which there can be no human thing more excellent, either for pleaſure or profit, as ſhall (God willing) be proved in the treatiſe following. And what an hindrance ſhall it be, not onely to the owner, but to the com- Skilfull.

mon

mon good, that the unſpeakable benefit of many hundred yeares ſhall be loſt, by the audacious attempt of an unskilfull Arboriſt?

Painfull. The Gardner had not need to be an idle or lazie Lubber, for ſo your Orchard, being a matter of ſuch moment, will not proſper, there will ever be ſomething to do. Weeds are alwayes growing, the great mother of all living Creatures, the Earth, is full of ſeeds, in her bowels, and any ſtirring gives them heat of Sunne, and being laid neer day, they grow: Moals work daily, though not alwaies alike: Winter hearbs at all times will grow (except in extream froſt). In winter your trees and hearbs would be lightned of Snow, and your allies cleanſed: drifts of Snow will ſet Deer, Hares, and Conies, and other noyſome beaſts over your walls and hedges into your Orchard. When Summer cloaths your borders with green and peckled colours, your Gardner muſt dreſs his hedges, and antick works: watch his Bees, and hive them: Diſtil his Roſes and other Hearbs. Now begin Summer fruits to ripe, and crave your hand to pull them. If he have a Garden (as he muſt needs) to keep, you muſt needs allow him good helpe, to end his labours which are endleſſe; for no one man is ſufficient for theſe things.

Wages. Such a Gardner as will conſcionably, quietly and patiently, travel in your Orchard, God ſhall Crown the labours of his hands with joyfulneſſe, and make the clouds drop fatneſſe upon your trees; he will provoke your love, and earn his wages, and fees belonging to his place. The houſe being ſerved, fallen fruit, ſuperfluity of hearbs, and flowers, ſeeds, graffes, Sets, and beſides all other of that fruit which your bountifull hand ſhall reward him withall, will much augment his wages, and the profit of your Bees will pay you back again.

If you be not able, nor willing to hire a Gardner, keep your profits to your ſelf, but then you muſt take all the pains; and for that purpoſe (if you want this faculty) to inſtruct you, have I undertaken theſe labours, and gathered theſe Rules, but chiefly reſpecting my Countries good.

CHAP.

CHAP. II.
Of the Soyle.

FRuit-trees moſt common, and meeteſt for our Northern Countries: (as Apples, Pears, Cherries, Filbirds, Red and White, Plummes, Damſons, Bullis,) for we meddle not with Apricocks nor Peaches, nor ſcarcely with Quinces, which will not like in our cold parts, unleſſe they be helped with ſome reflect of the Sun or other like means, nor with buſhes bearing berries, as Barberriers, Gooſe-berries or Groſers, Raſpe-berries, and ſuch like, though the Barbery be wholſome, and the Tree may be made great; do require (as all other Trees do) a black, fat, mellow, clean and well tempered ſoyl, wherein they may gather plenty of good ſap. Some think the Haſel would have a chanily rock, and the ſallow, and elder, a wateriſh mariſh. The ſoyl is made better by delving and other meanes, being well melted, and the wildneſs of the earth and weeds (for every thing ſubject to man and ſerving his uſe (not well ordered) is by nature ſubject to the curſe,) is killed by froſt and drought, by fallowing and laying on heaps, and if it be wild earth, with burning. Kinds of trees. Soyl.

If your ground be barren (for ſome are forced to make an Orchard of barren ground) make a pit three quarters deep, and two yards wide, and round in ſuch places where you would ſet your trees, and fill the ſame with fat, pure, and mellow earth, one whole foot higher than your ſoyl, and therein ſet your plant. For who is able to manure a whole Orchard plot, if it be barren? But if you determine to manure the whole ſite, this is your way; dig a trench half a yard deep, all along the lower (if there be a lower ſide of your Orchard plot,) caſting up all the earth on the inner ſide and fill the ſame with good, ſhort, hot, and tender muck; and make ſuch another trench, and fill the ſame as the firſt, and ſo the third, and ſo throughout your ground; and by this meanes your plot ſhall be fertile for your life. But be ſure you ſet your Trees neither in dung, nor barren earth. Barren earth.

Your ground muſt be plain, that it may receive, and keep moyſture, not onely the rain falling thereon, but alſo water caſt upon it, or deſcending from higher ground by ſluices, Conduits, Plain.

&c. For I account moyſture in ſummer very needfull in the ſoyle of trees, and drought in winter, provided that the ground be neither boggy, nor the inundation be paſt 24 hours at any time, and but twice in the whole Summer and ſo oft in the Winter. Therefore if your plot be in a bank; or have a deſcent, make trenches by degrees, allyes, walks, and ſuch like, ſo as the water may be ſtayed from paſſage; and if too much water be any hindrance to your walks (for dry walkes do well become an Orchard, and an Orchard them) raiſe your walks with earth firſt, and then with ſtones as big as wall-nuts, and laſtly, with gravel. In Summer you need not doubt too much water from heaven, either to hurt the health of your body, or your trees. And if over-flowing moleſt you, after one day, avoid it then by deep trenching.

Moyſt.

Some for this purpoſe dig the ſoyl of their Orchards, to receive moiſture, which I cannot approve: for the roots with digging are often times hurt, and eſpecially being digged by ſome unskilfull ſervant; for the Gardner cannot do all himſelf: and moreover, the Roots of Apples and Peares being laid neer day with the heat of the Sun, will put forth ſuckers, which are a great hinderance, and ſometimes with evill guiding, the deſtruction of trees, unleſſe the delving be very ſhallow, and the ground laid very level again. Cherries and Plums, without delving, will hardly or never (after twenty years) be kept from ſuch ſuckers, nor Aſps.

Graſſe alſo is thought needfull for moiſture, ſo you let it not touch the Roots of your trees; for it will breed moſſe; and the boal of your tree neer the earth, would have the comfort of the Sun and air.

Graſſe.

Some take their ground to be too moiſt when it is not ſo, by reaſon of water ſtanding thereon; for except in ſowre marſhes; ſprings, and continuall over-flowings, no earth can be too moiſt. Sandy and fat earth will avoid all water falling, by receit: indeed a ſtiff clay will not receive the water, and therefore if it be graſſie or plain, eſpecially hollow, the water will abide, and it will ſeem wateriſh, when the fault is in the want of manuring, and other good dreſſing.

This plainneſs which we require had need be naturall, becauſe to force any uneven ground, will deſtroy the fatneſſe: for every

ſoyl

ſoyl hath his cruſt next day ; wherein trees and hearbs put their roots, and whence they draw their ſap, which is the beſt of the ſoyl, and made fertil with heat and cold, moiſture and drought, and under which, by reaſon of the want of the ſaid temperature by the ſaid four qualities, no tree nor hearb (in a manner) will or can put root ; as may be ſeen, if in digging your ground, you take the weeds of moſt growth, as graſs or docks (which will grow, though they lye upon the earth bare,) yet bury them under the cruſt, and they will ſooner dye and periſh, and become manure to your ground. This cruſt is not paſt 15 or 18 inches deep in good ground, or other grounds leſſe. Hereby appears the fault of forced plaines, *viz.* your cruſt in the lower parts is covered with the cruſt of the higher parts, and both with worſe earth : your hights having the cruſt taken away, are become meerly barren : ſo that either you muſt force a new cruſt, or have an evill ſoyl. And be ſure you levell before you plant, leſt you bee forced to remove, or hurt your plants by digging, and caſting among their roots. Your ground muſt be cleered, as much as you may, of ſtones and gravel, walls, hedges, buſhes, and other weeds.

Naturally plain.

Cruſt of the earth.

CHAP. III.

Of the Site.

THere is no difference, that I find, betwixt the neceſſity of a good ſoyl, and a good Site of an Orchard: For a good ſoil (as is before deſcribed) cannot want a good Site ; and if it doe, the fruit cannot be good ; and a good ſite will much amend an evill ſoyl. The beſt ſite is in low grounds, and (if you can) neer unto a River. High grounds are not naturally fat.

Low and neer a River.

And if they have any fatneſſe by mans hand, the very deſcent in time doth waſh it away. 'Tis with grounds in this caſe, as it is with men in a common wealth : Much will have more ; and, Once Poor, ſeldom or never Rich. The Rain will ſcind and waſh, and the wind will blow fatneſs from the hights to the hollows, where it will abide, and fatten the earth, though it were barren before.

Hence it is, that wee have ſeldome any plaine grounds and low, a barren, and as ſeldome any hights naturally fertile. It is

unſpeakable, what fatneſſe is brought to low grounds by inundations of waters; neither did I never know any barren ground in a low plain by a River ſide. The goodneſſe of the ſoyl in *Howle* or *Hollowderneſſe* in *York-ſhire*, is well known to all that know the River *Humber*, & the huge bulks of their Cattel there. By eſtimation of thoſe that have ſeen the low grounds in *Holland* and *Zealand*, they far ſurpaſſe moſt Countries in *Europe* for fruitfulneſſe, and only becauſe they lye ſo low. The world cannot compare with *Egypt* for fertility, ſo far as *Nilus* doth overflow his banks. So that a fitter place cannot be choſen for an Orchard, then a low plain by a River ſide. For beſides the fatneſs which the water brings, if any cloudy miſt or rain be ſtirring, it commonly falls down to, and follows the courſe of the River. And where ſee we greater Trees of bulk and bough, then ſtanding on, or neer the water ſide? If you ask why the plains in *Holderneſſe* and ſuch Countries, are deſtitute of wood? I anſwer, that men and cattel (that have put trees thence, from out of plains to void corners) are better than trees. Neither are thoſe places without trees. Our old Fathers can tell us how woods are decayed, & people in the room of trees multiplyed. I have ſtood ſomewhat long in this poynt, becauſe ſome do condemn a moiſt ſoyl for fruit Trees.

Pſal. 1. 3.
Ezek. 17. 8.
Eccluſ. 39. 17.
Mr. *Markham.*

Winds.
Chap. 13.

A low ground is good to avoid the danger of winds, both for ſhaking down your unripe fruit. Trees (the moſt that I know) being loaden with wood for want of proyning, and growing high by the unskilfulneſs of the Arboriſt, muſt needs be in continuall danger of the South Weſt, Weſt and North-weſt winds, eſpecially in *September* and *March*, when the ayr is moſt temperate from extream heat and cold, which are deadly enemies to great winds. Wherefore chuſe your ground low: Or if you be forced to plant in a higher ground, let high and ſtrong walls, houſes and trees, as Wall nuts, Plane-trees, Oaks and Aſhes, placed in good order, be your fence for winds.

The ſucken of your dwelling houſe, deſcending into your Orchard, if it be cleanly conveyed is good.

Sun.

The Sun, in ſome ſort, is the life of the world: it maketh proud grouth, and ripens kindly and ſpeedily, according to the golden Tearm, *Annus fructificat, non tellus.* Therefore in the Countrie.

Countries neerer approaching the Zodiack the Suns habitation, they have better, and ſooner ripe fruit, then we that dwel in theſe frozen parts.

This provoketh moſt of our great Arboriſts to plant Apricocks, Cherries, and Peaches, by a wall, and with tacks, and other means to ſpread them upon, and faſten them to a wall, to have the benefit of the immoderate reflex of the Sun, which is commendable, for the having of fair, good, and ſoon ripe fruit. But let them know, it is more hurtfull to the trees than the benefit they reap thereby, as not ſuffering a tree to live the tenth part of his age; it helps Gardeners to work. For firſt, the wall hinders the roots; becauſe into a dry and hard wall of earth or ſtone, a tree will not, nor cannot put any root to profit, but eſpetially it ſtops the paſſage of the ſap, whereby the bark is wounded, and the wood and diſeaſes grow, ſo that the tree becomes ſhort of life. For as in the body of man, the leaning or lying on ſome member, whereby the courſe of blood is ſtopt, makes that member as it were dead for the time, till the blood return to his courſe, and I think, if that ſtopping ſhould continue any time, the member will periſh for want of blood, (for the life is in the blood) and ſo indanger the body; ſo the ſap is the life of the tree, as the blood is to mans body: neither doth the tree in winter (as is ſuppoſed) want his ſap, no more than mans body his blood, which in winter, and time of ſleep, draws inward: ſo that the dead time of winter, to a tree, is but a night of reſt: for the tree at all times, even in winter, is nouriſh'd with ſap and growth as well as mans body. The chilling cold may well ſome little time ſtay or hinder the proud courſe of the ſap, but ſo little and ſo ſhort a time, that in calm and mild ſeaſons, even in the depth of winter, if you mark it, you may eaſily perceive the ſap to put out, and your trees to increaſe their buds which were formed in the Summer before, and may eaſily be diſcerned; for leaves fall not off, till they be thruſt off with the knots or buds, whereupon it comes to paſſe, that trees cannot bear fruit plentifully two years together, and make themſelves ready to bloſſome againſt the ſeaſonableneſſe of the next ſpring. Trees againſt a wall.

And if any froſt be ſo extream, that it ſtay the ſap too much, or too long, then it kills the forward fruit in the bud, and ſome-

times the tender leaves and twigs, but not the tree: Wherefore to returne, it is perilous to ſtop the ſap. And where, or when did you ever ſee a great tree packt on a wall? Nay, who did ever know a tree ſo unkindly ſplat, come to age? I have heard of ſome that out of their imaginary cunning, have planted ſuch trees, on the North ſide of the wall, to avoid drought: but the heat of the Sun is as comfortable (which they ſhould have regarded) as the drought is hurtfull. And although water is a ſoveraign remedy againſt draught, yet want of Sun is no way to be helped. Wherefore, to conclude this Chapter, let your ground lye ſo, that it may have the benefit of the South and weſt Sun, and ſo low and cloſe, that it may have moiſture, and increaſe his fatneſs, (for trees are the greateſt ſuckers and pillers of the earth) and (as much as may be) free from great winds.

CHAP. IV.
Of the Quantity.

IT would be remembred what a benefit riſeth, not onely to every particular owner of an Orchard, but alſo to the common wealth by fruit, as ſhall be ſhewed in the ſixteenth Chapter (God willing); whereupon muſt needs follow, the greater the Orchard is (being good, and well kept) the better it is: for of good things, being equally good, the biggeſt is the beſt. And if it ſhall appear, that no ground a man occupieth, (no, not the Corn field) yeeldeth more gain to the purſe, and houſe keeping (not to ſpeak of the unſpeakable pleaſure) quantity for quantity, than a good Orchard, (beſides, the coſt in planting and dreſſing an Orchard is not ſo much by far, as the labour and Seeding of your Corn fieldes nor for durance of time comparable, beſides the certainty of the one before the other) I ſee not how any labour or coſt in this kind, can be idely or wilfully beſtowed, or thought too much. And what other thing is a Vineyard, in thoſe Countries where Vines doe thrive, then a large Orchard of trees bearing fruit; or what difference is there in the juyce of the Grape, and our Syder and Perry, but the goodneſſe of the ſoyle, and clime where they grow? which maketh the one more ripe, and ſo more pleaſant than the other. Whatſoever can be ſaid for the

Orchard as good as a Corn field.

Compared with a Vineyard.

the benefit riſing from an Orchard, that makes for the largeneſſe of the Orchard bounds And me thinks they do prepoſterouſly, that beſtow moſt coſt and labour, and more ground in and upon a Garden, then upon an Orchard, whence they reap and may reap both more pleaſure and more profit, by infinite degrees. And further, that a Garden never ſo freſh, and fair, and well kept, cannot continue without both renewing of the earth and the hearbs often, in the ſhort and ordinary age of a man: whereas your Orchard well kept, ſhall dure divers hundred yeeres, as ſhall be ſhewed Chap 14. In a large Orchard there is much labour ſaved, in fencing and otherwiſe: for three little Orchards or a few trees, being in a manner all out-ſides, are ſo blaſted and dangered, and commonly in keeping neglected, and require a great fence; whereas in a great Orchard, trees are a mutuall fence one to another, and the keeping is regarded; and leſſe fencing ſerves ſix acres together, then three in ſeverall incloſures. Compared with a Garden

Now what quantity of ground is meeteſt for an Orchard, can no man preſcribe, but that muſt be left to every mans ſeverall judgment, to be meaſured according to his ability and will, for other neceſſaries beſides fruit muſt be had, and ſome are more delighted with Orchards than others. What quantity of ground.

Let no man, having a fit plot, plead poverty in this caſe; for an Orchard once planted, will maintain it ſelf, and yeeld infinite profit beſide. And I am perſwaded, that if men did know the right and beſt way of planting, dreſſing, and keeping trees, and felt the profit and pleaſure thereof, both they that have no Orchards, would have them, and they that have Orchards would have them larger, yea fruit trees in their hedges, as in *Worceſter-ſhire*, &c. And I think, the want of planting is a great loſſe to our Common-wealth, and in particular, to the owners of Lordſhips, which Landlords themſelves might eaſily amend, by granting longer time and better aſſurance to their Tenants, who have taken up this Proverb, *Botch and ſit, Build and flit*: for who will build or plant for another mans profit? Or the Parliament might injoyn every occupier of grounds to plant and maintaine for ſo many acres of fruitfull ground, ſo many ſeverall trees, or kinds of trees for fruit. Thus much for quantity. What is no hindrance. How Landlords by their Tenants may make flouriſhing Orchards ing *England*.

CHAP.

A. All theſe ſquares muſt be ſet with Trees, the Gardens and other Ornaments muſt ſtand in ſpaces betwixt the trees, and in the borders and fences.

B Trees twenty yards aſunder.
C. Garden Knots

D. Kitchin Garden
E. Bridge.
F. Conduit.
G. Staires.

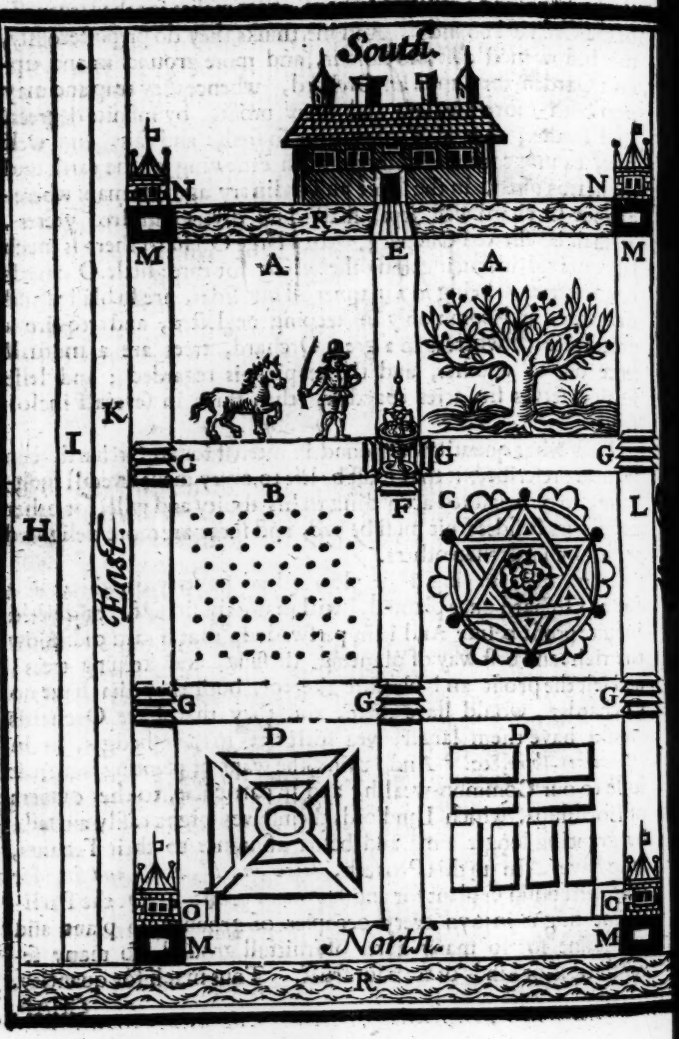
H. Walks ſet with great wood thick.
I. Walks ſet with great wood round about your Orchard

K. The Out fence
L. The Out fence ſet with ſtone-fruit.

M. Mount. To force earth for a Mount or ſuch like, ſet it round with quick and lay boughes of trees ſtrangely intermingl'd, the tops inward, with the earth in the middle

N. Still-houſe.
O. Good ſtanding for Bees, if you have an houſe.

P. If the River run by your door, and under your Mount it will be pleaſant.



CHAH. V.
Of the Form.

THe goodneſſe of the ſoil and ſite, are neceſſary to the well-being of an Orchard ſimply; but the form is ſo far neceſſary, as the owner ſhall think meet. For that kind of form wherewith every particular man is delighted, we leave it to himſelfe, *Suum cuique pulchrum.* The form that men like in generall, is a ſquare: for although roundneſſe be *forma perfectiſſima*, yet that principle is good, where neceſſity by art doth not force ſome other form. If within one large ſquare, the Gardiner ſhall make one round Labyrinth or Maze, with ſome kind of Berries, it will grace you form, ſo there be ſufficient room left for walkes, ſo will four or more round knots do, for it is to be noted, that the eye muſt be pleaſed with the form. I have ſeen ſquares riſing by degrees, with ſtayrs from your houſe-ward, according to this form which I have, *Craſſa quod aiunt Minerva*, with an unſteady hand, rough hewen: for in forming Country gardens, the better ſort may uſe better forms, and more coſtly work. What is needfull more to be ſaid, I referre all that (concerning the form) to the Chapter 17. of the Ornaments of an Orchard.

The uſuall form is a ſquare.

CHAP. VI.
Of fences.

ALL your labour paſt and to come about an Orchard is loſt, unleſſe you fence well: It ſhall grieve you much to ſee your young ſets rubd looſe at the Roots, the bark pild, the boughs and twigs cropt, your fruit ſtolne, your Trees broken, and your many years labours and hopes deſtroyed, for want of fences. A chief care muſt be had in this point: you muſt therefore plant in ſuch a ſoile, where you may Provide a convenient, ſtrong, and ſeemly fence. For you can poſſeſſe no goods, that have ſo many enemies as an Orchard, look Chapter 13. Fruits are ſo delightſome, and deſired of ſo many, (nay in a manner of all) and yet few will be at coſt, and take pains to provide them. Fence well therefore, let your plot be wholly in your owne power, that you

Effects of evill fencing.

Let the fence be your own.

make all your fence your ſelf: for neighbours fence is none at all, or very careleſſe. Take heed of a door or window, (yea of a wall) of any other mans into your Orchard, yea, though it be nailed up, or the wall be high, for perhaps they will prove theeves.

Kinds of Fences, earthen walles.

All fences commonly are made of Earth, Stone, Brick, Wood, or both earth and wood: Dry wall of earth, and dry ditches are the worſt fences ſave pales or railes, and do waſte the ſooneſt, unleſſe they be well copt with Glooe and morter, whereon at Michael tide it will be good to ſow Wall-flowers, commonly called Bee-flowers, or winter Gilly-flowers, becauſe they will grow (though among ſtones) and abide the ſtrongeſt froſt and drought, continually green and flowring even in winter, and have a pleaſant ſmell, and are timely, (that is, they will flower the firſt and the laſt of flowers) and are good for Bees. And your earthen wall is good for bees, dry and warm, but theſe fences are both unſeemly, evill to repair, and onely for need, where ſtone or wood cannot be had. Whoſoever makes ſuch walls, muſt not pill the ground in the Orchard, for getting earth, nor make any pits or hollowes, which are both unſeemly and unprofitable: old dry earth mixt with ſand is beſt for theſe. This kind of wall will ſoon decay by reaſon of the Trees which grow neer it, for the roots and boals of great Trees, will increaſe, undermine, and over-turn ſuch walls, though they were of ſtone, as is apparent by Aſhes, Round-trees, Burt-trees, and ſuch like, carried in the chat, or berry, by birds into ſtone walls.

Pale & Raile.

Fences of dead wood, as pales, will not laſt, neither will railes either laſt or make good fence.

Stone walls.

Stone walls, (where ſtone may be had) are the beſt of this ſort, both for fencing laſting, and ſhrouding of your young trees. but about this you muſt beſtow much Paines and more coſt, to have them handſome, high and durable.

Quick wood and Moats.

But of all other (in mine opinion) Quickwood and moates or ditches of water, where the ground is Levell, is the beſt fence: In unequal grounds, which will not keep water, there a double ditch may be caſt, made ſtreight and Levell on the top two yards broad for a fair walk, five or ſix foot higher than the ſoile, with a gutter on either ſide, two yards wide, and four foot deep, ſet without with three or four cheſſe of thorns, and within with Cherries, Plummes,

Plummes, Damſons, Bullis, Filberds, (for I love thoſe trees better for their fruit, and as well for their form, as Privit,) for you may make them take any form. And in every corner, (and middle if you will) a mount would be Raiſed, whereabout the wood may claſpe, poudered with wood-binde, which will make with dreſſing a faire, pleaſant, profitable, and ſure fence. But you muſt be ſure that your quick thorns either grow wholly, or that there be a ſupply betimes, either planting new, or plaſhing the old where need is. And aſſure your ſelf, that neither wood, ſtone, earth, nor water, can make ſo ſtrong a fence, as this at ſeven years growth.

Moates, Fiſh-ponds, and (eſpecially at one ſide a River) within and without your fence, will afford you fiſh, fence, and moyſture to your Trees; and pleaſure alſo, if they be ſo great and deep that you may have Swans, and other water Birds, good for devouring of vermine, and boat for many good uſes. Moates.

It ſhall hardly availe you to make any fence for your Orchard, if you be a niggard of your fruit. For as Liberality will ſave it beſt from noiſome neighbours, (Liberality I ſay is the beſt fence) ſo juſtice muſt reſtrain Rioters. Thus when your ground is tempered, ſquared, and fenced, it is time to provide for planting.

CHAP. VII.
Of Sets.

THere is not one point (in my Opinion) about an Orchard more to be regarded, than the choiſe getting and ſetting of good plants, either for readineſſe of having good fruit, or for continuall laſting, for whoſoever ſhall fail in the choice of good ſets, or in getting, or gathering, or ſetting his plants, ſhall never have a good or laſting Orchard. And I take want of skill in this faculty, to be a chief hinderance to the moſt Orchards, and to many for having Orchards at all.

Some for Readineſſe uſe ſlips, which ſeldome take Root, and if they do take, they cannot laſt, both becauſe their Root having a maine wound will in ſhort time decay the body of the Tree: and beſides, that Roots being ſo weakly put, are ſoon nipt with drought or froſt, I could never ſee (lightly) any ſlip, but of apples onely, ſet for Trees. Slips.

Bur-knot. A Bur-knot kindly taken from an Apple-tree, is much better and ſurer. You muſt cut him cloſe at the Root end, an handfull under the knot, (ſome uſe in Summer about Lammas to circumciſe him and put earth to the knots with hay-Ropes, and in winter cut him off and ſet him but this is curioſity needleſſe, and danger with removing and drought) and cut away all his twigs ſave one, the moſt principall, which in ſetting you muſt leave above the earth, burying his trunck in the cruſt of the earth for his Root. It matters not much what part of the bough the twigs grow out of. If it grow out of, or neer the Root end, ſome ſay ſuch an apple will have no core nor kernel. Or if it pleaſe the planter he may let his bough be crooked, and leave out his top end one foot, or ſomewhat more, wherein will be good grafting; if either you like not, or doubt the fruit of the bough, (for commonly your bur-knots are Summer fruit) or if you think he will not Recover his wound ſafely.

Uſuall ſets. The moſt uſuall kind of Sets, are plants with Roots growing, of kernels of Apples, Pears, and Crabbs, or ſtones of Cherries, Plums, &c. removed out of a nurſery, wood, or other Orchard, into, and ſet, in your Orchard in due places; I grant this kind to be

Maine Roots cut. better than either of the other by much, as more ſure and more durable. Herein you muſt note, that in Sets ſo removed, you get all the Roots you can, and without bruiſing of any, I utterly diſlike the opinion of thoſe great Gardners, that following their books, would have the maine Roots cut away: for tops cannot

Srow ſets removen. grow without Roots. And becauſe none can get all the Roots, and removal is an hinderance, you may not leave on all tops, when you ſet them: For there is a proportion betwixt the Top and Root of a Tree, even in the number, (at leaſt in the growth) If the Roots be many, they will bring you many Tops, if they be not hindered. And if you uſe to ſtow or top your tree too much or too low, and leave no iſſue, or little for ſap, (as is to be ſeen in your hedges) it will hinder the growth of Roots and boal, becauſe ſuch a kind of ſtowing is a kind of ſmothering or choaking the ſap. Great Wood, as Oak, Elm, Aſh, &c. being continually kept down with ſheer knife, ax, &c. neither boal nor Root will thrive, but as an hedge or buſh. If you intend to graff in your ſets, you may cut him cloſer with a greater wound, and neerer the earth with-

within a foot or two, becauſe the graft or grafts will cover his wound. If you like his fruit, and would have him to be a Tree of himſelfe, be not ſo bold. This I can tell you, that though you do cut his top cloſe, and leave nothing but his bulke, becauſe his roots are few, if he be (but little) bigger than your thumb, (as I wiſh all plants removed to be) he will ſafely recover his wound within ſeven years, by good guidance, that is, if the next time of dreſſing, immediately above his uppermoſt ſprig, you cut him off aſlope cleanly, ſo that the ſprig ſtand on the back ſide, (and if you can Northward, that the wound may have the benefit of the Sun) at the upper end of the wound, and let that ſprig onely be the boal. And take this for a generall rule; Every young plant, if he thrive, will recover any wound above the earth, by good dreſſing, although it be to the one halfe, and to his very heart. This ſhort cutting at the remove, ſaves your plants from wind, and needs the leſſe or no ſtaking: I commend not lying or leaning of Trees againſt holds or ſtays; for it breeds obſtruction of ſap, and wounds incurable. All removing of Trees as great as your arm, or above, is dangerous; though ſome time ſuch will grow, but not continue long, becauſe they be tainted with deadly wounds, either in the Root or top, (and a Tree once thorowly tainted, is never good.) And though they get ſome hold in the earth with ſome leſſer taw or taws, which give ſome nouriſhment to the body of the Tree; yet the heart being tainted, he will hardly ever thrive: which you may eaſily diſcern by the blackneſſe of the boughs at the heart, when you dreſſe your trees. Alſo, when he is ſet with more tops than the Roots can nouriſh; the tops decaying, blacken the boughs, and the boughs the arms, and ſo they boil at the very heart. Or this taint in the removall, if it kill not preſently, but after ſome ſhort time, it may be diſcerned, black or yellowneſſe in the bark, and a ſmall hungred leaf. Or if your removed plant put forth leaves the next and ſecond Summer, and little or few ſpraſes, is a great ſign of a taint, and next years death. I have known a Tree tainted in ſetting, yet grow, and bear bloſſoms for divers years; and yet for want of ſtrength could never ſhape his fruit.

Generall rule.

Tying of trees.

Generall rule.

Signes of diſeaſes, chap. 13.

Next unto this, or rather equall with theſe plants, are ſuckers growing out of the Roots of great Trees, which Cherries and Plums

Suckets good ſets.

Plums do ſeldome or never want, and being taken kindly with their Roots, will make very good ſets. And you may help them much by enlarging their Roots with the taws of the tree, whence you take them. They are of two ſorts: Either growing from the very Root of the Tree: and here you muſt be carefull, not to hurt your Tree when you gather them; by Ripping amongſt the Roots, and that you take them clean away; for theſe are a great and continual annoyance to the growth of your Tree, and they will hardly be cleanſed. Secondly, or they do ariſe from ſome taw: and theſe may be taken without danger, with long and good Roots, and will ſoon become Trees of ſtrength.

A Running plant.

There is another way, which I have not thorowly proved, to get not onely plants for graffing, but Sets to remain for Trees, which I call a *Running plant*, the manner of it is this: Take a Root or kirnel, and put into the middle of your plot; and the ſecond year in the ſpring, geld his top, if he have one principal, (as commonly by nature they have) and let him put forth only four Syons toward the four corners of the Orchard, as neer the earth as you can. If he put not four (which is rare) ſtay his top till he have put ſo many. When you have four ſuch, cut the ſtock aſlope, as is aforeſaid in this Chapter, hard above the uppermoſt ſprig, and keep thoſe four without Syons clean and ſtreight till you have them a yard and a half, at leaſt, or two yards long. Then the next ſpring, in graffing time, lay down thoſe four ſprays, towards the four corners of your Orchard, with their tops in a heap of pure and good earth, and raiſed as high as the Root of your Syon, (for ſap will not deſcend) and a ſod to keep them down, leaving nine or twelve inches of the top to look upward. In that hill he will put Roots, and his top new Syons, which you muſt ſpread as before, and ſo from hill to hill, till he ſpread the compaſſe of your ground, or as far as you Lift. If in bending the Syons crack, the matter is ſmall; cleanſe the ground, and he will recover. Every bended bough will put forth branches, and become Trees. If this plant be of a bur knot, there is no doubt: I have proved it in one branch my ſelfe, and I know at *Wilton* in *Cleveland*, a Pear-Tree of a great bulk and age, blown cloſe to the earth, hath put at every knot Roots into the earth, and from Root to top, a great number of mighty arms or Trees, filling a great Room, like many Trees, or

a little Orchard; much better may it be done by Art, in a leſſe Tree. And I could not miſlike this kind, ſave that time will be long before it come to perfection.

Many uſe to buy ſets already grafted, which is not the beſt way: for firſt, all removes are dangerous: Again, there is danger in the carriage: Thirdly, it is a coſtly courſe of planting: Fourthly, every Gardner is not truſty to ſell you good fruit: Fifthly, you know not which is beſt, which is worſt, and ſo may take moſt care about your worſt Trees. Laſtly, this way keeps you from practiſe, and ſo from experience, in ſo Good, Gentlemanly, Scholar-like, and profitable a faculty. Sets bought.

The onely beſt way (in my opinion) to have ſure and laſting ſets, is never to remove: for every remove is a hinderance, if not a dangerous hurt, or deadly taint. This is the way: The platform being laid, and the plot appointed where you will plant every Set in your Orchard, dig the room where your ſet ſhall ſtand, a yard compaſſe, and make the earth mellow and clean, and mingle it with a few cole-aſhes, to avoid worms, and immediatly after the firſt change of the Moon, in the latter end of *February*, the earth being afreſh turned over, put in every ſuch room three or four kirnels of Apples or Pears of the beſt; every kirnel in an hole made with your finger, finger-deep, a foot diſtant one from another, and that day month following, as many more, (leaſt ſome of the former miſſe) in the ſame compaſs, but not in the ſame holes. Hence (God willing) ſhall you have roots enough: If they all or divers of them come up, you may draw, (but not dig) up (nor put down) at your pleaſure, the next *November*. How many ſoever you take away, to give or beſtow elſewhere, be ſure to leave two of the proudeſt. And when in your ſecond or third year you graff, if you graff then at all, leave the one of thoſe two ungraffed, leſt in graffing the other, you fail. For I find by tryall, that after the firſt or ſecond graffing in the ſame ſtock, being miſt (for who hits all) the third meſſe puts your ſtock in deadly danger, for want of iſſue of ſap. Yea, though you hit in graffing, yet may your graffs with wind or otherwiſe be broken down. If your graff, or graff proſper, you have your deſire, in a plant unremoved, without taint, and the fruit at your owne choice: and ſo you may, (ſome little earth being removed) pull but not dig The beſt ſets. Unremoved how.

up

up the other plant or plants in that room. If your graff or ſtock, or both periſh, you have another in the ſame place, of better ſtrength to work upon; for thriving without ſhub, he will overlay your grafted ſtock much. And it is hardly poſſible to miſſe in grafting ſo often, if your Gardiner be worth his name.

Sets ungrafted beſt of all.

It ſhall not be amiſſe, (as I judge it) if your kernels be of choice fruit, and that you ſee them come forward proudly in their body, and beare a fair and broad leaf in colour, tending to a greeniſh yellow, (which argues pleaſant and great fruit) to try ſome of them ungrafted: for although it be a long time ere this come to bear fruit, ten or twelve years, or more; and at their firſt bearing, the fruit will not ſeem to be like his owne kind, yet am I aſſured, upon Tryall, before twenty years growth, ſuch Trees will increaſe the bigneſſe and goodneſſe of their fruit, and come perfectly to their owne kind. Trees (like other breeding creatures) as they grow in years, bigneſſe, and ſtrength, ſo they mend their fruit. Husbands and Houſwives find this true by experience, in the Rearing of their young ſtore. More than this, there is no Tree like this for ſoundneſſe, and durable laſt, if his keeping and dreſſing be anſwerable. I grant, the readieſt way to come ſoon to fruit, is graffing; becauſe, in a manner, all your graffs are taken off fruit-bearing Trees.

Time of removing.

Now when you have made choiſe of your ſets to remove, the ground being ready, the beſt time is, immediatly after the fall of the Leaf, in or about the change of the Moon, when the ſap is moſt quiet, for then the ſap is turning: for it makes no ſtay, but in the extremity of drought or cold: At any time in winter, may

Generall rule.

you tranſplant Trees, ſo you put no ice nor ſnow to the Root of your plant in the ſetting: and therefore open, calm, and moyſt weather is beſt. To remove, the Leaf being ready to fall, and not fallen, or buds apparently put forth in a moiſt warm ſeaſon, for need, ſometime may do well; but the ſafeſt is to walk in the plain trodden path.

Some hold Opinion, that it is beſt removing before the fall of the Leaf, and I hear it is commonly practiſed in the South by our beſt Arboriſts, the leaf not fallen, & they give the reaſon to be, that the deſcending of the ſap will make ſpeedy Roots. But mark the Reaſons following, and I think you ſhall find no ſoundneſſe either in

in that poſition or practice, at leaſt in the reaſon.

1. I ſay, it is dangerous to remove when the ſap is not quiet; for every remove gives a main check to the ſtirring ſap, by ſtaying the courſe thereof in the body of your plant, as may appear by trees removed any time in Summer, they commonly dye, nay hardly ſhall you ſave the life of the moſt young and tender plant of any kind of wood (ſcarcely hearbs) if you remove them in the pride of ſap: for proud ſap univerſally ſtayed by removall, ever hinders, often taints, and ſo preſently, or in very ſhort time, kills. Sap is like blood in mans body, in which is the life, Chap. 3. page 9. If the blood univerſally be cold, life is excluded: ſo is ſap tainted by untimely removall. A ſtay by drought, or cold, is not ſo dangerous (though dangerous, if it be extream) becauſe more natural.

2. The ſap never deſcends, as men ſuppoſe; but is conſolidated and tranſubſtantiated into the ſubſtance of the tree, and paſſeth (alwaies above the earth) upward, not only betwixt the bark and the wood, but alſo into and in both body and bark, though not ſo plentifully, as may appear by a tree budding, nay fructifying two or three yeers, after he be circumciſed, at the very root, like a River that enlargeth his channel by a continual deſcent.

3. I cannot perceive what time they would have the ſap to deſcend. At *Midſummer* in a biting drought it ſtayes, but deſcends not; for immediately upon moiſture, it makes ſecond ſhoots, as (or before rather) *Michaeltide*, when it ſhapens his buds for next yeers fruit. If at the fall of the leaf, I grant, about that time is the greateſt ſtand, but no deſcent of ſap, which begins ſomewhat before the leaf fall, but not long; therefore at that time muſt be the beſt removing, not by reaſon of deſcent, but ſtay of ſap.

4. The ſap in this courſe hath its profitable and apparent effects; as the growth of the tree, covering of wounds, putting of buds &c. Whereupon it followes, if the ſap deſcend, it muſt needs have ſome effect to ſhew it.

5. Laſtly, boughs plaſht and laid lower than the root, dye for want of ſap deſcending, except where it is forced by the maine ſtream of the ſap, as in top boughs hanging like water in pipes, or except the plaſht boughs lying on the ground put roots of his own; yea under boughs, which we commonly call water-boughs

can ſcarcely get ſap to live, yea in time dye, becauſe the ſap doth preſſe ſo violently upward, and therefore the faireſt ſhoots and fruits are alwaies in the top.

Remove ſoon. *Obiect.* If you ſay that many ſo removed thrive; I ſay, that ſomewhat before the fall of the leaf (but not much) is the ſtand; for the fall and the ſtand are not at one inſtant; before the ſtand, is dangerous. But to return.

The ſooner in Winter you remove your ſets the better; the latter the worſe; for it is very perillous if a ſtrong draught take your ſets before they have made good their Rooting. A plant ſet at the fall, ſhall gain (in a manner) a whole years growth of that which is ſet in the ſpring after.

The manner of ſetting. I uſe in the ſetting to be ſure that the earth be mouldy, (and ſomewhat moiſt) that it may run among the ſmall tangles without ſtraining or bruiſing; and as I fill in earth to his Root, I ſhake the Set eaſily too and fro, to make the earth ſettle the better to his Roots; and withall eaſily with my foot I put in the earth cloſe; for Aire is noyſome, and concavities will follow. Some preſcribe Oates to be put in with the earth: I could like it, if I could know any Reaſon thereof. And they uſe to ſet their plants with the ſame ſide towards the Sun; but this conceit is like the other. For firſt, I would have every tree to ſtand ſo free from ſhade, that not onely the Root (which therefore you muſt keep bare from graſſe) but body, boughs, and branches, and every ſpray, may have the benefit of the Sun. And what hurt, if that part of the tree which before was ſhadowed, be now made partakers of the heat of the Sun? In turning of Bees, I know it is hurtfull, becauſe it changeth their entrance, paſſage, and whole work, but not ſo in trees.

Set in the cruſt. Set as deep as you can, ſo that in any wiſe you go not beneath the cruſt. Look Chap 2.

Moiſture good We ſpake in the ſecond Chapter of moiſture in generall; but now eſpecially having put your removed plant into the earth, powr on water (of a puddle were good) by diſtilling preſently, and ſo every week twice, in ſtrong drought, ſo long as the earth will drink, and refuſe by over flowing. For moiſture mollifies, and both gives leave to the Roots to ſpread, and makes the earth yeeld ſap and nouriſhment with plenty and facility. Nurſes, they

(they ſay) give beſt and moſt milk after warm drinks.

If your ground be ſuch, that it will keep no moyſture at the Root of your plant, ſuch plants ſhall never like, or but for a time. There is nothing more hurtfull for young trees, then peircing drought. I have known trees of good ſtature, after they have been of divers years growth, and thrive well for a good time, periſh for want of water, and very many by reaſon of taints in ſetting.

It is meete your ſets and grafts be fenced, till they be as big as your arm, for feare of annoyances. Many wayes may Sets receive damages, after they be ſet, whether grafted or ungrafted. For although we ſuppoſe, that no noyſome beaſt or other thing muſt have acceſſe among your trees; yet by caſualty, a Dog, Cat, or ſuch like, or your ſelf, or negligent Friend bearing you Company, or a ſhrewd boy, may tread or fall upon a young and tender plant or graft. To avoid theſe and many ſuch chances, you muſt ſtake them round a pretty diſtance from the Set, neither ſo neer nor ſo thick, but that it may have the benefit of the Sun, Raine, and Air. Your ſtakes (ſmall or great) would be ſo ſurely put, or driven into the earth, that they break not, if any thing happen to lean upon them, elſe may the fall be more hurtfull then the want of the fence. Let not your ſtakes ſhelter any weeds about your Sets; for want of Sun is a great hinderance. Let them ſtand ſo far off, that your grafts ſpreading receive no hurt, either by rubbing on them, or of any other thing paſſing by. If your ſtock be long, and high grafted, (which I muſt diſcommend, (except in need) becauſe there the ſap is weak, and they are ſubject to ſtrong winds, and the lightings of birds,) tie eaſily with a ſoft liſt three or foure pricks, under the clay, and let their tops ſtand above the grafts to avoid the lighting of Crows, Pies, &c. upon your grafts. If you ſtick ſome ſharp thorns at the Roots of your ſtalks, they will make hurtfull things keep off the better. Other better fences for your grafts I know none. And thus much for ſets and ſetting.

Grafts muſt be fenced.

CHAP. VIII.

Of the diſtance of Trees.

I Know not to what end you ſhould provide good ground, well fenced, and plant good ſets, and when your trees ſhould come

to profit, have all your labours loſt, for want of due regard to the diſtance of placing your trees. I have ſeen many trees ſtand ſo thick, that one could not thrive for the throng of his neighbours. If you do mark it, you ſhall ſee the tops of trees rubbed off, their ſide galled like a gall'd horſe back; and many trees have more ſtumps than boughs, and moſt trees not well thriving, but ſhort ſtumpiſh, and evill thriving boughs; like a Corn-field over-ſeeded, or a Town over peopled, or a paſture over laid; which the Gardner muſt either let grow, or leave the tree very few boughs to bear fruit. Hence ſmall thrift, galls, wounds, diſeaſes, and ſhort life to the trees; and while they live, green, little, hard, worm-eaten, and evill thriving fruit ariſe, to the diſcomfort of the owners.

Hurts of too neer planting

To prevent which diſcommodity, one of the beſt remedyes is, the ſufficient and fit diſtance of trees. Therefore at the ſetting of your plants, you muſt have ſuch reſpect, that the diſtance of them be ſuch, that every tree be not annoyance, but an help to his fellows; for trees (as all other things of the ſame kind) ſhould ſhroud, and not hurt one another. And aſſure your ſelf, that every touch of trees (as well under as above) is hurtfull: Therefore this muſt be a general uſe rule in this Art, that no tree in an Orchard well ordered, or no bough, nor cyon, drop upon or touch his fellows. Let no man think this impoſſible, but looke in the eleventh Chapter of dreſſing of trees. If they touch, the wind will cauſe a forcible rub. Young twigs are tender, if boughs or armes touch or rub, if they are ſtrong, they make great galls. No kind of touch therefore in trees can be good.

General rule, All touches hurtfull.

Now it is to be conſidered what diſtance among Sets is requiſite, and that muſt be gathered from the compaſſe and room that each tree by probability will take and fill. And herein I am of a contrary opinion to all them which practiſe or teach the planting of trees, that ever yet I knew, read or heard of: for the common ſpace between tree and tree, is ten foot; if twenty foot, it is thought very much. But I ſuppoſe twenty yards diſtance is ſmall enough betwixt tree and tree, or rather too too little. For the diſtance muſt needs be as far as two trees are well able to overſpread and fill, ſo they touch not by one yard at the leaſt. Now I am aſſured, and I know one Apple tree, ſet of a ſlip *finger great*, in

The beſt diſtance of trees.

in the ſpace of twenty yeares (which I account a very ſmall part of a trees age, as is ſhewed Chap. fourteen) hath ſpread his boughs eleven or twelve yards compaſſe ; that is, five or ſixe yards on every ſide. Hence I gather, that in forty or fifty years, (which yet is but a ſmall time of his age) a tree in good ſoyle, well liking, by good dreſſing (for that is much availeable to this purpoſe) will ſpread double at the leaſt, viz. twelve yards on a ſide ; which being added to twelve allotted to his fellow make twenty and foure yards, and ſo far diſtant muſt every tree ſtand from another. And look how far a tree ſpreads his boughs above, ſo far doth he put his roots under the earth, or rather further, if there be no ſtop nor let by walls, trees, rocks, barren earth, and ſuch like : for an huge bulk, and ſtrong armes, maſſie boughs, many branches, and infinite twigs, re- The parts of a quire wide ſpreading Roots. The top hath the vaſt aire to Tree. ſpread his boughs in, high and low, this way and that way ; but the Roots are kept in the cruſt of the earth, they may not goe downward, nor upward out of the earth, which is their Element, no more than the Fiſh out of the water, Camelion out of the aire, nor Salamander out of the fire. Therefore they muſt needs ſpread far under the earth. And I dare well ſay, If nature would give leave to man, by Art to dreſſe the Roots of Trees to take away the taws, and tangles that lap and fret, and grow ſuperfluouſly and diſorderly, (for every thing *ſublunary* is curſed for mans ſake) the tops above being anſwerably dreſſed, we ſhould have trees of wonderfull greatneſſe, and infinite durance. And I perſwade my ſelf that this might be done ſometimes in Winter, to trees ſtanding in fair plaines and kindly earth, with ſmall or no danger at all. So that I conclude, that twenty four yards is the leaſt ſpace that Art can allow for trees to ſtand diſtant one from another.

If you aske me what uſe ſhall be made of that waſte ground Waſt grounds betwixt tree and tree : I anſwer, if you pleaſe to plant ſome in an Orchard tree or trees in that middle ſpace, you may ; and as your trees grow contiguous, great and thick, you may at your pleaſure take up thoſe laſt trees. And this I take to be the chief cauſe why the moſt trees ſtand ſo thick ; for men not knowing (or not regarding) this ſecret of needfull diſtance, and loving

fruit of trees planted to their hands, think much to pull up any, though they pine one another. If you or your heirs or ſucceſſors would take up ſome great trees (paſt ſetting) where they ſtand too thick, be ſure to do it about *Midſomer*, and leave no main Roots. I deſtinate the ſpace of four and twenty yards, for trees of age and ſtature. More then this, you have borders to be made for walks, with Roſes, Berries, &c.

And chiefly conſider, that your Orchard, for the firſt twenty or thirty years, will ſerve you for many Gardens; for Saffron Licoras, Roots, and other heaibs for profit, and flowres for pleaſure: ſo that no ground need be waſted if the Gardiner be skilfull and diligent. But be ſure you come not neer with ſuch deep delving the Roots of your Trees, whoſe compaſſe you may partly diſcern, by the compaſs of the tops, if your top be well ſpread. And under the droppings and ſhadow of your Trees, be ſure no heaibs will like. Let this be ſaid for the diſtance of Trees.

CHAP. IX.

Of the placing of Trees.

THe placing of Trees in an Orchard is well worth the regard: For although it muſt be granted, that any of our foreſaid Trees (Chap. 2.) will like well in any part of your Orchard, being good and well dreſt earth; yet are not all Trees alike worthy of a good place. And therefore I wiſh that your Filbert, Plums, Damſons, Bulleſs, and ſuch like, be utterly removed from the plain ſoyl of your Orchard into your fence: for there is not ſuch fertility and eaſefull growth, as within: and there alſo they are more ſubject to, & can abide the blaſts of *Æolus*. The Cherries and Plums being ripe in the hot time of Summer, and the reſt ſtanding longer, are not ſo ſoon ſhaken as your better fruit, neither, if they ſuffer loſſe, is your loſſe ſo great. Beſides that, your fences and ditches will devour ſome of your fruite growing in, or neere your hedges. And ſeeing the continuance all of theſe (except Nuts) is ſmall, the care of them ought to be the leſſe. And make no doubt, but the fences of a large Orchard will contain a ſufficient number of ſuch kind of Fruit Trees in the whole compaſs. It is not materiall, but at your pleaſure, in the ſaid fences, you may either intermingle your

your ſeverall kinds of fruit trees; or ſet every kind by it ſelfe, order doth very well become your better and greater fruit. Let therefore your Apples, Pears, and Quinces, poſſeſſe the foyl of your Orchard, unleſſe you be eſpecially affected to ſome of your other kinds; and of them, let your greateſt trees of growth ſtand further from Sun, and your Quinces at the South ſide or end, and your Apples in the middle: ſo ſhall none be any hindrance to his fellows. The warden tree, and Winter pear, will challenge the preeminence for ſtature. Of your Apple-trees, you ſhall find a difference in growth. A good Pippin will grow large, and a Coſtard tree: ſtead them on the North ſide of your other Apples; thus being placed, the leaſt will give Sun to the reſt, and the greateſt will ſhroud their fellows. The Fences and out trees will guard all.

CHAP. X.

Of Grafting.

NOw are we come to the moſt curious point of our facul- Of Graving or Carving
ty, curious in conceit, but indeed as plain and eaſie as the reſt, when it is plainly ſhewn, which we commonly call Graf- Grafting what,



fing

Grafting what

fing or (after ſome) Gratting, I cannot Etymologize or ſhew the original of the Word, except it come of Graving or Carving.

But the thing or matter is : The reforming of the fruit of one tree with the fruit of another, by an artificial tranſplacing or tranſpoſing of a twigge bud or leaf, (commonly called a

A Graffe.

Graft) taken from one tree of the ſame, or ſome other kind, and placed or put to, or into another tree in one time and manner.

Kinds of grafting.

Of this there be divers kinds, but three or four now eſpecially in uſe : to wit, Grafting, inciſing, packing on, grafting in the ſcutchion, or inoculating ; whereof the chief and moſt uſuall, is called Grafting (by the generall name, *Catexochen* :) for it is the moſt known, ſureſt, readieſt, and plaineſt way to have ſtore of good fruit.

Graft how.

It is thus wrought : You muſt with a fine, thin, ſtrong and ſharp Saw, made and armed for that purpoſe, cut off a foot above the ground, or thereabouts, in a plain without a knot, or as near as you can without a knot (for ſome ſtocks will bee knotty) your Stock, ſet or plant being ſurely ſtayed with your foot and legg : or otherwiſe ſtraight overthwart (for the Stock may be crooked) and then plain his wound ſmoothly with a ſharp knife : that done, cleave him cleanly in the middle with a clever, and a knock or mall, and with a wedge of Wood, Iron, or Bone, two handfull long at leaſt, put in the middle of that clift, with the ſame knock, make the wound gape a ſtraw breadth wide into which you muſt put your Graffes.

A graft what.

The graft is a top twig taken from ſome other tree (for it is a folly to put a graff into his own ſtock) beneath the uppermoſt (and ſometimes in need, the ſecond) knot, and with a ſharp knife fitted in the knot (and ſometimes out of the knot when need is) with ſhoulders an inch downward, and ſo put into the ſtock with ſome thruſting (but not ſtraining) bark to bark inward.

Eyes.

Let your graff have three or four eyes for readineſſe to put forth, and give iſſue to the ſap. It is not amiſſe to cut off the top of your graffe, and leave it but five or ſix inches long, becauſe commonly you ſhall ſee the tops of long graffes dye. The reaſon is this. The ſap in graffing receives a rebuke, and cannot work ſo ſtrongly preſently,

ſently and your graffes receive not ſap ſo readily, as the naturall branches. When your graffs are cleanly and cloſely put in, & your wedge pulld out nimbly, for fear of putting your graffs out of frame, take well tempered morter, ſoundly wrought with chaffe or horſe dung, (for the dung of Cattel will grow hard, and ſtraine your graffs) the quantity of a Gooſe egge, and divide it Juſt, and therewith all cover your ſtock, laying the one halfe on the one ſide, and the other halfe on the other ſide of your graffes, (leſt thruſting again your graffes you move them) and let both your hands thruſt at once, and alike, and let your clay be tender, to yield eaſily; and all, leſt you move your graffes. Some uſe to cover the cleft of the ſtock, under the clay, with a Piece of barke or leaſe, ſome with a ſear-cloth of waxe and butter, which as they be not much needfull, ſo they hurt not, unleſſe that by being buſie about them, you move your graffs from their places. They uſe alſo moſſe, tyed on above the clay with ſome bryar, wicker, or other bands. Theſe profit nothing. They all put the graffes in danger, with pulling and thruſting: for I hold this generall Rule in graffing and planting; if your ſtock and graffes take and thrive, (for ſome will take and not thrive, being tainted by ſome meanes in the planting or graffing) they will (without doubt) recover their wounds ſafely and ſhortly. General rule.

The beſt time of graffing, from the time of removing your ſtock is the next Spring, for that ſaves a ſecond wound, and a ſecond repulſe of ſap, if your ſtock be of ſufficient bigneſſe to take a graff from as big as your thumbe, to as big as an arme of a man. You may graffe leſſe, (which I like) and bigger, which I like not ſo well. The beſt time of the year is in the laſt part of *February*, or *March*, or beginning of *Aprill*, when the Sun with his heat begins to make the ſap ſtirre more Rankly about the change of the Moon, before you ſee any great apparency of leaſe or flowers, but onely knots and buds, and before they be proud, though it be ſooner: Cherries, Peares, Apricocks, Quinces, and Plummes would be gathered and grafted ſooner. Time of graffing.

The graffes may be gathered ſooner in *February*, or any time within a month, or two before you graffe, or upon the ſame day (which I commend) If you get them any time before: for I Gathering of graffes.

have known graffes gathered in *December* and do well, take heed of drought, I have my ſelf taken a burke not of a Tree, and the ſame day when he was laid in the earth about mid *February* gathered grafts and put in him, and one of thoſe graffes bore the third year after, and the fourth plentifully; Graffes of old Trees would be gathered ſooner then of young Trees, for they ſooner break and bud. If you keep graffes in the earth, moiſture with the heat of the Sun will make them ſprout as faſt, as if they were growing on the Tree. And therefore ſeeing, keeping is dangerous, the ſureſt way (as I judge) is to take them within a week of the time of your grafting.

Graffes of old trees.

The grafts would be taken not of the proudeſt twigs, for it may be your ſtock is not anſwerable in ſtrength. And therefore (ſay I) the grafts brought from South to us in the North, although they take and thrive, (which is ſomewhat doubtfull, by reaſon of the difference of the clime and carriage) yet ſhall they in time faſhion themſelves to our cold Northern ſoile, in grouth, taſte, &c.

Where taken.

Nor of the pooreſt; for want of ſtrength may make them unready to receive ſap, (and who can tell but a poor graft is tainted) nor on the outſide of your Tree, for there ſhould your Tree ſpread, but in the middeſt: for there you may be ſure your Tree is no whit hindered in his grouth or form. He will ſtill recover inward, more then you would wiſh. If your clay cliſt in Summer with drought, look well in the Chinkes for Emmets and Earwigs, for they are cunning and cloſe theeves, about grafts; you ſhall find them ſtirring in the morning and evening, and the rather in the moiſt weather: I have had many young buds of Graffs, even in the flouriſhing, eaten with Ants. Let this ſuffice for graffing, which is in the faculty counted the chiefe ſecret, and becauſe it is moſt uſuall, it is beſt known.

Emmits.

Graffs are not to be diſliked for grouth, till they wither, pine, and die. Uſually before *Midſummer* they break, if they live. Some (but few) keeping proud and green, will not put till the ſecond year, ſo is it to be thought of Sets.

The firſt ſhew of putting is no ſure ſigne of grouth, it is but the ſap the graffe brought with him from his Tree.

So ſoon as you ſee the graft put forth grouth, take away the clay, for then doth neither the ſtock nor the graft need it, (put a little

little freſh well tempered clay in the hole of the ſtock) for the clay is now tender, and rather keeps moiſture then drought.

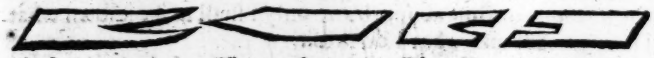
The other waies of changing the naturall fruit of Trees, are more curious then profitable, and therefore I mind not to beſtow much labour or time about them, only I ſhall make known what I have proved, and what I do think.

And firſt of inciſing, which is the cutting of the back of the boale, a Rine or branch of a Tree at ſome bending or knee, ſhoulderwiſe with two gaſhes, onely with a ſharp knife to the wood: then take a wedge, the bigneſs of your graff, ſharp ended, flat on the one ſide, agreeing with the Tree, and round on the other ſide, and with that being thruſt in, raiſe your bark, then put in your graffe, faſhioned like your wedge juſt: and laſtly, cover your wound, and faſt it up, and take heed of ſtraining. This will grow but to ſmall purpoſe, for it is weak hold, and lightly it will be under grouth. Thus may you graft betwixt the bark and the Tree of a great ſtock that will not eaſily be clifted. But I have tryed a better way for great trees, *viz.* Firſt cut him off ſtraight, and cleanſe him with your knife, then cleave him into four quarters equally with a ſtrong cleaver: then take for every clift two or three ſmall, (but hard) wedges, juſt of the bigneſſe of your grafts, and with thoſe wedges driven in with a hammer, open the four clifts ſo wide, (but no wider) that they may take your four graffes with thruſting, not with ſtraining: and laſtly, cover and clay it cloſely, and this is a ſure and good way of grafting: or thus, clift you ſtock by his edges twice or thrice with your clever, and open him with your wedge in every clift one by one, and put in your graffes and then cover them. This may do well. Inciſing. A great ſtock.

Packing on, is when you cut aſlope a twig of the ſame bigneſſe with your graft, either in or beſide the knot, two inches long, and make your graft agree jump with the cyon, and gaſh your graft and your cyon in the middeſt of the wound, length-way, a ſtraw breadth deep, and thruſt the one into the other, wound to wound, ſap to ſap, barke to barke, then tye them cloſe and clay them. This may do well. The faireſt graft I have in my little Orchard, which I have planted, is thus packt on, and the branch whereon I put him, is in his plentifull Root. Packing thus.

To be ſhort in this point, cut your graft in any ſort or faſhion

two inches long and joyne him cleanly, and close to any other sprig of any Tree in the latter end of the time of grafting, when sap is somewhat rise, and in all probability, they will close and thrive: thus.



The sprig. The graft. The swig. The graft.

Or any other fashion you think good.

Innoculating. Innoculating is an eye or bud, taken bark and all from one Tree, and placed in the room of another eye or bud of another; cut both of one compass, and their bound. This must be done in Summer, when the sap is proud.

Much like unto this, is that they call grafting in the scutchion, they differ thus: That here you must take an eye with his leaf, or (in mine opinion) a bud with his leaves. (Note that an eye is for a scion, a bud is for flowers and fruit) and place them on an other Tree, in a plain (for they so teach:) the place or bark where you must set it, must be thus cut with a sharp knife, and the bark raised with a wedge, and then the eye or bud put in and so bound up, I cannot deny but such may grow. And your bud if he take will flower, and beare fruit in that year: as some grafts and sets also, being set for bloomes. If these two kinds thrive, they reform but a spray, and an under growth. Thus you may place Roses or Thorns, and Cherries on Apples, and such like. Many write much more of grafting, but to small purpose. Whom we leave to themselves, and their followers, and ending this secret, we come in the next Chapter to a point of knowledge, most requisite in an Arboriſt, as well for all other woods as for an Orchard.

Grafting in Scutchion.

CHAP. II.

Of the right dressing of Trees.

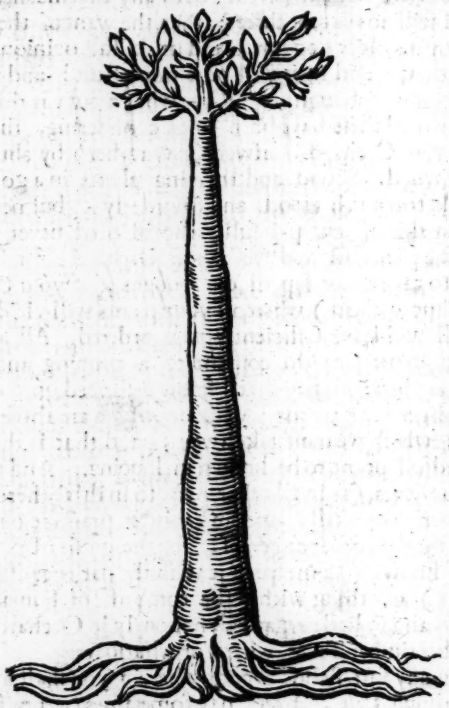
Necessity of dressing trees. IF all these things afore-said were indeed performed, as we have shewed them in words, you should have a perfect Orchard nature and substance, begun to your hand: And yet are all these things nothing, if you want that skill to keep and dresse your Trees. Such is the condition of all earthly things, whereby a man receiveth profit or pleasure, that they degenerate presently

ly without good ordering. Man himſelf left to himſelfe, growes from his heavenly and ſpirituall generation, and becometh beaſtly, yea, deviliſh to his own kind, unleſſe he be regenerate. No marvell then, if Trees make their ſhoots, and put their ſprays diſorderly. And truly, (if I were worthy to judge) there is not a miſchiefe that breedeth greater and more generall harme to all the Orchard, (eſpecially if they be of any continuance) that ever I ſaw, (I will not except three) then the want of the skilfull dreſſing of trees. It is a common and unskilfull opinion, and ſaying, Let all grow, and they will bear more fruit: and if thou lop away ſuperfluous boughs, they ſay, what a pitty is this? how many Apples would theſe have born? not conſidering, there may ariſe hurt to your Orchard, aſwell (nay rather) by abundance as by want of wood. Sound and thriving plants in a good ſoile will ever yield too much wood, and diſorderly, but never too little. So that a skilfull and painfull Arboriſt need never want matter to effect a plentifull and well dreſt Orchard; for it is an eaſie matter to take away ſuperfluous boughs, (if your Gardner have skill to know them) whereof your plants will yield abundance; and skill will leave ſufficiently well ordered. All ages both by rule and experience do conſent to a pruning and lopping of Trees: yet have not any that I know deſcribed unto us, (except in dark and generall words) what or which are thoſe ſuperfluous boughes, which we muſt take away, and that is the chiefe and moſt needfull point to be known in lopping. And we may well aſſure our ſelves, (as in all other Arts, ſo in this) there is a vantage and dexterity by skill, and an habit by practice out of experience, in the performance hereof, for the profit of mankind; yet do not I know, (let me ſpeak it with the patience of our cunning Arboriſts) any thing within the compaſſe of human affaires ſo neceſſary, and ſo little regarded, not onely in Orchards, but alſo in all other timber Trees, where, or whatſoever. Generall rule.

How many forreſts and woods wherein you ſhall have for one lively thriving Tree, four (nay ſometimes twenty four) evill thriving, Rotten and dying Trees, even while they live? and in ſtead of trees, thouſands of buſhes and ſhrubs. What rottenneſſe, what hollowneſſe, what dead armes, withered tops, curtalled trunks, what loads of moſſes, drouping boughs? and dying branch- Timber wood evill dreſt.

branches you ſhall ſee every where? And thoſe that are like in this ſort are in a manuer all unprofitable boughs, cankered armes, crooked, little and ſhort boals; what an infinite number of buſhes, ſhrubs, and skrogs of hazels, thornes, and other profitable wood, which might be brought by dreſſing to become great and goodly trees? Conſider now the cauſe: The leſſer wood hath been

The cauſe of harts in woods



Imagine the Root to be ſpread far wider.

ſpoyled with careleſſe, unskilfull, and untimely ſtowing, and much alſo of the great wood. The greater trees at the firſt riſing have filled and over-laden themſelves with a number of waſtfull boughs

boughes and ſuckers, which have not only drawn the ſap from the boale, but alſo have made it knotty, and themſelves and the boale moſſie for want of dreſſing, whereas if in the prime of grouth they had been taken away cloſe, all but one top (according to this pattern) and clean by the bulk, the ſtrength of all the ſap ſhould have gone to the bulke, and ſo he would have recovered and covered his knots, and have put forth a faire long and ſtraight body, (as you ſee) for timber profitable, huge, great of bulke, and of infinite laſt. Dreſſe timber trees how.

If all Timber Trees were ſuch (will ſome ſay) how ſhould we have crooked wood for wheels, &c?

Anſw. Dreſſe all you can, and there will be enough crooked for thoſe uſes.

More then this, in moſt places, they grow ſo thick, that neither themſelves, nor earth, nor any thing under or neer them can thrive, nor Sun, nor Rain, nor Aire can do them, nor any thing neer or under them, any profit or comfort.

I ſee a number of Hags, where, out of one Root you ſhall ſee three or four, (nay more, ſuch is mens unskilfull greedineſſe, who deſiring many, have none good) pretty Okes or Aſhes ſtraight and tall, becauſe the Root at the firſt ſhoot gives ſap amaine: but if one onely of them might be ſuffered to grow, and that well and cleanly pruned, all to his very Top, what a Tree ſhould we have in time? And we ſee by thoſe Roots continually and plentifully ſpringing, notwithſtanding ſo deadly wounded, what a commodity ſhould ariſe to the owner, and the Commonwealth, if wood were cheriſhed, and orderly dreſſed.

The waſte boughs cloſely and skilfully taken away, would give us ſtore of fences and fuell, and the bulk of the Tree in time would grow of huge length and bigneſſe. But here (me-thinks) I hear an unskilfull Arboriſt ſay, that Trees have their ſeverall forms, even by nature, the Peare, the Holly, the Aſpe, &c. grow long in bulk with few and little armes, the Oke by nature broad, and ſuch like. All this I grant, but grant me alſo, that there is a profitable end and uſe of every Tree, from which if it decline, (though by nature) yet man by art may, (nay muſt) correct it. Now other end of Trees, I could never learn, then good Timber; fruit much and good, and pleaſure, uſes phyſicall hinder nothing a good form. Profit of trees dreſſed. The end of trees.

Nei-

Trees wil take any forme.

Neither let any man ſo much as think, that it is unprofitable, much leſſe unpoſſible, to reform any Tree of what kind ſoever. For (believe me) I have tryed it, I can bring any tree (beginning betimes) to any form. The Peare and Holly may be made to ſpread, and the Oke to cloze.

But why do I wander out of the compaſſe of mine Orchard into the Forreſts and Woods? Neither yet am I from my purpoſe, if boals of timber-trees ſtand in need of all the ſap, to make them great and ſtreight, (for ſtrong grouth and dreſſing makes ſtrong trees) then it muſt be profitable for fruit, (a thing more immediatly ſerving a mans need) to have all the ſap his Root can yield: for as timber, ſound, great, and long, is the *good of timber Trees*, and therefore they bear no fruit of worth: ſo fruit, good,

The end of trees.

ſound, pleaſant, great and much, is the end fruit Trees. That gardner therefore ſhall perform his duty skilfully and faithfully, which ſhall ſo dreſſe his Trees, that they may bear ſuch and ſuch ſtore of fruit, which he ſhall never do, (I dare undertake) unleſſe he keep this Order in dreſſing his Trees.

How to dreſſe a fruit tree.

A fruit Tree ſo ſtanding, that there need none other end of dreſſing but fruit, (not Ornaments, not walks, nor delight to ſuch as would pleaſe their eye only, and yet the beſt form cannot but both adorne and delight) muſt be parted from within two foot or there abouts, of the earth, ſo high to give liberty to dreſſe his Root, and no higher, for drinking up the ſap that ſhould feed his fruit, for the boale will be firſt, and beſt ſerved and fed, becauſe he's next the Root, and of greateſt waxe and ſubſtance, and that makes him longeſt of Life, into two, three, or foure armes, as your ſtocke or graffes yield twigs, and every arme into two or more branches, and every branch into his ſeverall ſyons, ſtill ſpredding by equall degrees, ſo that his loweſt ſpray be hardly without the reach of a mans hands, and his higheſt be not paſt two yards higher, rarely, (eſpecially in the middeſt) that no one twig touch his fellow. Let him ſpread as farre as he liſt without his maſter-bough, or lop equally. And when any bough doth grow ſadder, and fall lower then his fellowes, (as they will with weight of fruit) eaſe him the next ſpring of his ſuperfluous twigs, and he will Riſe: when any bough or ſpray ſhall amount above the reſt; either ſnub his top with a nip betwixt

twixt your finger and your thumb,or with a ſharp knife, and take him clean away, and ſo you may uſe any Cyon you would reforme ; and as your tree growes in ſtature and in ſtrength, ſo let him riſe with his tops but ſlowly, and early,eſpecially in the middeſt, and equally, and in breadth alſo ; and follow him upward with lopping his under grouth and water boughs, keeping the ſame diſtance of two yards, but not above three in any wiſe, betwixt the loweſt and the higheſt twigs.

Benefits of good dreſſing. Remedy.

1. Thus you ſhall have well liking, clean-skind, healthfull, great,and long-laſting trees.

2. Thus ſhall your tree grow low,and ſafe from winds,for his top will be great,broad,and weighty.

3. Thus growing broad, ſhall your trees bear much fruit (I dare ſay) one as much as ſix of your common trees,and good without ſhadowing,dropping and fretting ; for his boughs,branches, and twigs ſhall be many, and thoſe are they (not the boal) which bear fruit.

4. Thus ſhall your boal being little (not ſmall, but low) by reaſon of his ſhortneſſe, take little, and yeeld much ſap to fruit.

5. Thus your trees by reaſon of ſtrength in time of ſetting ſhall put forth more bloſſomes and more fruit, becauſe free from taints (for ſtrength is a great help to bring forth much) and ſafely, whereas weakneſs failes in ſetting, though the ſeaſon be calm.

Some uſe to bare trees Roots in Winter, to ſtay the ſetting till hotter ſeaſons, which I diſcommend, becauſe

1. They hurt the Roots.

2. It ſtayes nothing at all.

3. Though it did,being ſmall,with us in the North they have their part of our *April* and *May* Froſts.

4. Hinderance cannot profit weak trees in ſetting.

5. They waſte much labour.

6. Thus ſhall your tree be eaſie to dreſſe, and without danger , either to the tree or the dreſſer.

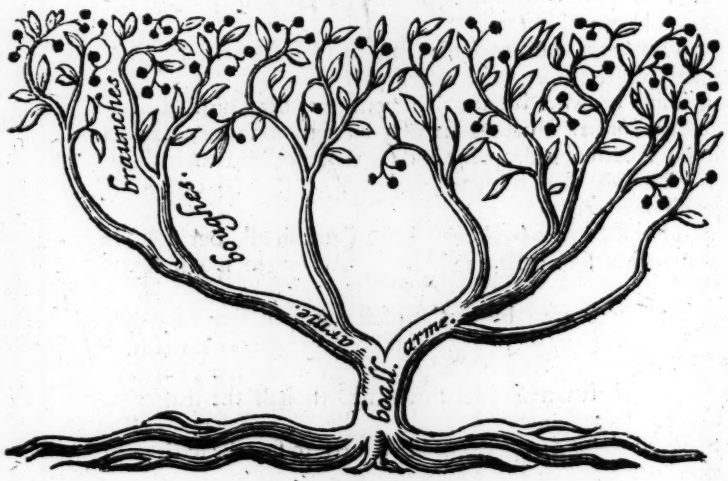
7. Thus may you ſafely and eaſily gather your fruit without falling,bruiſing, or breaking of Cyons.

This is the beſt form of a fruit tree, which I have here ſhad-

dowed out for the better capacity of them that are led more with the eye, then the mind, craving pardon for the deformity, becauſe I am nothing skilfull either in the painting or carving.

Imagine that the paper makes but one ſide of the tree to appear, the whole round compaſs will give leave for many more armes, boughs, branches, and cyons.

The perfect form of a Fruit-tree.



If any tree cannot well be brought to this form: *Experto crede Roberto*, I can ſhew divers of them under twenty years of age.

Time beſt for Proyning.

The fitteſt time of the Moon for proyning, is, as of grafting, when the ſap is ready to ſtir (not proudly ſtirring) and ſo to cover the wound: and of the yeer, a month before (or at leaſt when) you graffe. Dreſſe Peares, Apricocks, Peaches, Cherries, and Bullyes ſooner. And old trees before young plants, you may dreſſe at any time betwixt Leaf and Leaf. And note where you take any thing away, the ſap the next Summer will be putting: Be ſure therefore when he puts a bud in any place where you would not have him, rub it off with your finger.

And

And here you muſt remember the common homely proverbe : Dreſſing betime.

Soone crookes the tree
That good Camrel muſt be.

Begin betimes with trees, and do what you liſt : but if you let them grow great and ſtubborne, you muſt do as the tree liſt. They will not bend but break, nor be wound without danger. A ſmall branch will become a bough, and a bough an arme in bigneſſe. Then if you cut him; his wound will feſter, and hardly without good skill recover: therefore, *Obſta principiis.* Of ſuch wounds, and leſſer, or any bough cut off a handfull or more from the body, comes hollowneſſe, and untimely death. And therefore when you cut, ſtrike cloſe, and clean, and upward, and leave no bunch. Faults of evill dreſt trees, and the remedy.

This forme in ſome caſes ſometimes may be altered : If your tree, or trees, ſtand neer your walks, if it pleaſe your fancy more, let him not break till his boal be above your head : ſo may you walk under your trees at your pleaſure. Or if you ſet your fruit trees for your ſhades in your Groves, then I reſpect not the forme of the tree but the comlineſſe of the walk. The form altereth.

All this hitherto ſpoken of dreſſing, muſt be underſtood of young plants, to be formed : it is meet ſomewhat be ſaid for the inſtruction of them that have old trees already formed, or rather deformed : for *Malum non vitatur niſi cognitum.* The faults therefore of a diſordered tree, I find to be five. Dreſſing of old trees.

1. An unprofitable boale.
2. Water boughs.
3. Fretters.
4. Suckers. And,
5. One principal top.

Faults are five, and their remedies.

A long boal asketh much feeding, and the more he hath the more he deſires, and gets, (as a drunken man drink, or a covetous man wealth,) and the leſſe remains for the fruit ; he puts his boughs into the ayr, and makes them, the fruit and it ſelf more dangered with winds ; for this I know no remedie, after that the tree is come to grouth ; once evill, never good. Long boale. No remedy.

Water boughes, or under growth, are ſuch boughes as grow low under others, and are by them over-grown, over-ſhadowed, dropped on, and pinde for want of plenty of ſap, and by that 1. Water boughes.

means in time dye: For the ſap preſſeth upward : and it is like water in her courſe, where it findeth moſt iſſue, thither it floweth, leaving the other leſſe ſluices dry, even as wealth to wealth, and much to more. Theſe ſo long as they bear, they bear leſſe, worſe and fewer fruit, and wateriſh.

Remedie. The Remedy is eaſie, if they be not grown greater than your arme, lop them cloſe and clean, and cover the middle of the wound; the next Summer when he is dry, with a ſalve made of tallow, tarre, and a very little pitch, good for the covering of any ſuch wound of a great tree : unleſſe it be bark-pild, and then a ſear cloth of freſh butter, hony and waxe preſently (while the wound is green) applyed, is a ſoveraign remedy, in Summer eſpecially. Some bind ſuch wounds with a thumb Rope of hay moiſt, and rub it with dung.

Bark pil'd, and the remedie.

Fretters. Fretters are, when as by negligence of the Gardner, two or more parts of the tree, or of divers trees, as armes, boughs, branches, or twigs, grow ſo neer and cloſe together, that one of them by rubbing doth wound one another. This fault of all other ſhews the want of skill (or care at leaſt) in the arboriſt : for here the hurt is apparent, and the remedye eaſie, ſeen to, betimes :

Touching.

Remedie. galls are wounds incurable, but by taking away thoſe members : for let them grow, and they will be worſe and worſe, and ſo kill themſelves with civill ſtrife for Roomth, and danger the whole tree. Avoid them betime therefore, as a Common-wealth doth boſome enemies.

Suckers. A Sucker is a long, proud, and diſorderly Cyon, growing ſtreight up (for pride of ſap makes proud, long, and ſtreight growth) out of any lower parts of the tree, receiving a great part of the ſap, and bearing no fruit, till it have tyrannized over the whole tree. Theſe are like idle and great Drones amongſt Bees : and proud and idle members in a Common-Wealth.

The Remedy of this is, as of water boughs, unleſſe they be grown greater than all the reſt of the boughs ; and then your Gardner (at your diſcretion) may leave him for his boale, and take away all, or the moſt of the reſt. If he by little ſlip him, and ſet him, perhaps he will take : my faireſt Apple tree was ſuch a ſlip.

One principal top or bough, and Remedy. One or two principall top boughes are as evill, in a manner as ſuckers; they riſe of the ſame cauſe, and receive the ſame Remedy :

medy ; yet theſe are more tolerable, becauſe theſe bear fruit, yea the beſt: but Suckers of long time do not bear.

I know not how your tree ſhould be faulty, if you reforme all your vices timely, and orderly. As theſe Rules ſerve for dreſſing young trees, and ſets in the firſt ſetting: ſo may they well ſerve to help old trees, though not exactly to cure them. Inſtruments for dreſſing.

The inſtruments fitteſt for all theſe purpoſes, are moſt commonly, for the greateſt trees, an handſome, long, light Ladder of Firpole, a little, nimble and ſtrong armed Saw, and ſharpe. For leſſe trees, a little and ſharpe hatchet, a broad mouthed Cheſel, ſtrong and ſharp, with an hand beetle, your ſtrong and ſharp Clever, with a knock, and (which is a moſt neceſſary inſtrument amongſt little trees) a great hafted and ſharp knife or whittle. And as needfull is a Stool on the top of the Ladder of eight or more rungs, with two back feet, whereon you may ſafely, and eaſily ſtand to graffe, to dreſſe, and to gather fruit, thus formed. The feet may be faſt wedged in: but the Ladder muſt hang looſe with two bands of Iron, and thus much of dreſſing trees for fruit, formally to profit.



CHAP. XII.

Of Soyling.

THere is one thing yet very neceſſary for to make your Orchard both better, and more laſting: Yea ſo neceſſary, that without it your Orchard cannot laſt, nor proſper long, which is neglected generally both in precepts and in practiſe, *viz.* manuring with ſoyl: whereby it hapneth that when trees (amongſt other evills) through want of fatneſſe to feed them, become moſſie, and in their growth are evil (or not thriving) it is either attributed to ſome wrong cauſe, as age (when indeed they are but young) or evill ſtanding (ſtand they never ſo well) or ſuch like, or elſe the cauſe is altogether unknown, and ſo not amended. Neceſſity of ſoyling.

Can there be deviſed any way by nature, or art, ſooner or ſoundlier to ſuck out, and take away the heart of earth, then by great trees; ſuch great bodyes cannot be ſuſtained without great ſtore of ſap? what living body have you greater then of trees; the great Sea monſters (whereof one came at land at *Teeſemouth* Trees great Suckers.

in *Yorkeſhire*, hard by us, 18 yards in length, and neer as much in compaſſe) ſeeme hideous, huge, ſtrange, and monſtrous, becauſe they be indeed great, but eſpecially, becauſe they are ſeldome ſeen: but a tree liking, come to his growth and age, twice that length, and of a bulk never ſo great, beſides his other parts, is not admired, becauſe he is ſo commonly ſeen. And doubt not, but if he were well regarded from his kernell, by ſucceeding ages, to his full ſtrength, the moſt of them would double their meaſure. About fifty yeers agoe, I heard by credible and conſtant reports, That in *Brookham* Parke in *Weſtmerland*, neer unto *Penrith*, there lay a blown Oak, whoſe trunk was ſo bigge, that two Horſe-men being the one on the one ſide, and the other on the other ſide, they could not ſee one another: to which if you add his arms, boughs, & roots, & conſider of his bigneſſe, what would he have been, if preſerved to the vantage? Alſo I read in the Hiſtory of the *Weſt-Indians*, out of *Peter Martyr*, that ſixteen men taking hands one with another, were not able to fathome one of thoſe trees about. Now nature having given to ſuch, a faculty by large and infinite Roots, taws and tangles, to draw immediately his ſuſtenance from our common mother the earth (which is like in this poynt to all other mothers that bear) hath alſo ordained that the tree over-loaden with fruit, and wanting ſap to feed all ſhe hath brought forth, will wain all ſhe cannot feed, like women bringing forth more Children at once than ſhe hath teats. See you not how trees eſpecially, by kind being great, ſtanding ſo thick and cloſe, that they cannot get plenty of ſap, pine away all the graſs, weeds, leſſer ſhrubs and trees; yea, and themſelves alſo, for want of vigour of ſap? ſo that trees growing large, ſucking the ſoyl whereon they ſtand continually and amaine, and the foizon of the earth that feeds them decaying (for what is there that waſtes continually, that ſhall not have an end?) muſt either have ſupply of ſucking, or elſe leave thriving and growing. Some grounds will bear corn while they be new, and no longer, becauſe their cruſt is ſhallow, and not very good, and lying they ſeind and waſh and become barren. The ordinary corn ſoyls continue not fertile, without fallowing & ſoyling, and the beſt requires ſupply even for the little body of corn. How then can we think that a-

ny

ny Ground how good ſoever can ſuſtain bodies of ſuch greatneſſe, and ſuch great feeding, without great plenty of ſap ariſing from good earth ? This is one of the chief cauſes why ſo many of our Orchards in England are ſo evill thriving when they come to grouth, and our fruit ſo bad. Men are loath to beſtow much ground, and deſire much fruit, and will neither ſet their trees in ſufficient compaſs, nor yet feed them with manure. Therefore of neceſſity Orchards muſt be ſoyled. Great bodies.

The fitteſt time is, when your trees are grown great, and have neer hand ſpread your earth, wanting new earth to ſuſtaine them, which if they do, they will ſeek abroad for better earth ; and ſhun that which is barren (if they find better) as cattell evill paſturing. For nature hath taught every creature to deſire and ſeek his own good, and to avoid hurt. The beſt time of the year is at the fall, that the froſt may bite and make it tender, and the Rain waſh it into the roots. The Summer time is perilous if ye dig, becauſe the ſap ſtirs amain. The beſt kind of ſoyl is ſuch as is fat, hot, and tender. Your earth muſt be lightly opened, that the Dung may go in, and waſh away ; and but ſhallow, leſt you hurt the Roots ; and in the ſpring, cloſely and equally made plain again for fear of Suckers. I could wiſh, that after my trees have fully poſſeſſed the ſoyl of mine Orchard, that every ſeven years at leaſt, the ſoyl were beſpread with dung half a foot thick at leaſt. Puddle water out of the Dunghill poured on plentifully, will not only moiſten but fatten exceedingly in *June*, and *July*. If it be thick and fat, and applied every year, your Orchard ſhall need none other ſoiling Your ground may lye ſo low at the River ſide, that the flood ſtanding ſome dayes and nights thereon, ſhall ſave you all this labour of ſoyling.

CHAP. XIII.

Of Annoyances.

A Chief help to make every thing good, is to avoid the evills thereof : you ſhall never attain to that good of your Orchard you look for, unleſſe you have a Gardener that can diſcern the diſeaſes of your trees, and other annoyances of your Orchard, and find out the cauſes thereof, and know and apply fit Remedies for the ſame. *For be your ground ſuch plants and trees as you would wiſh, and if they be waſted with hurtfull things, what have*

have you gained, but your labour for your travel? It is with an Orchard and every tree, as with mans body. The beſt parts of phyſick for preſervation of health, is to foreſee and cure diſeaſes.

Two kinds of evills in an Orchard.

All the diſeaſes of an Orchard are of two ſorts, either internall, or externall. I call thoſe inward hurts which breed on, and in, particular trees.

1 Galles.
2 Canker.
3 Moſſe.
4 Weakneſſe in ſetting
5 Bark bound.
6 Bark pild.
7 Worm.
8 Deadly wounds.

Galls.

Galls, Cankers, Moſſe, Weakneſſe, though they be divers diſeaſes, yet (howſoever authors think otherwiſe) they riſe all out of the ſame cauſe.

Galls we have deſcribed with their cauſe and remedy, in the eleventh Chapter under the name of fretters.

Canker.

Canker is the conſumption of any parts of the tree barke and wood; which alſo in the ſame place is deciphered under the title of water-boughs.

Moſſe.

Moſſe is ſenſible ſeen and known of all, the cauſe is poynted out in the ſame Chapter, in the diſcourſe of timber wood, and partly alſo the remedy: but for Moſſe adde this, that any time in ſummer (the ſpring is beſt, when the cauſe is removed) with an Hair cloth immediately after a ſhowre of rain, rub off your Moſs or with a piece of wood (if the moſſe abound) formed like a great knife.

Weakneſſe in ſetting.

Weakneſſe in the ſetting of your fruit ſhall you find there alſo in the ſame Chapter, and his remedy. All theſe flow from the want of Roomth in good ſoyl, wrong planting, Chapter ſeven, and evill, or no dreſſing.

Bark-bound.

Bark bound as I think riſeth of the ſame cauſe, and the beſt and preſent remedy (the cauſes being taken away) is with your ſharp knife in the ſpring, length way to launce his bark thorow-out 3 or 4 ſides of his boul.

Worm.

The diſeaſe called the worm is thus diſcerned: the bark will be hollow in divers places like gall, the wood will dye and dry, and you ſhall ſee eaſily the bark ſwell: it is verily to be thought that therein is bred ſome Worm. I have not yet thorowly ſought it out, becauſe I was never troubled therewithall: but only

onely have ſeen ſuch trees in divers places. I think it a Worme rather, becauſe I ſee this diſeaſe in trees, bringing fruit of ſweet taſte, and the ſwelling ſhewes as much. The remedy (as I conjecture) is, ſo ſoon as you perceive the wound, the next Spring cut it out bark and all, and apply Cows piſſe and vinegar preſently, and ſo twice or thrice a week, for a moneths ſpace: For I well perceive, if you ſuffer it any time, it eates the Tree or bough round, and ſo kills. *Since I firſt wrote this treatiſe, I have changed my mind concerning the diſeaſe called the worm, becauſe I read in the Hiſtory of the Weſt-Indians, that their Trees are not troubled with the diſeaſe called the Worm or Canker, which ariſeth of a raw and evill concocted humor or ſap. Witneſſe* Pliny: *by reaſon the Country is more hot then ours; wherefore I think the beſt remedy is (not diſallowing the former, conſidering that the Worme may breed by ſuch an humor) warme ſtanding, ſound lopping, and good dreſſing.*

Bark-pill'd, you ſhall find with his remedy, in the eleventh Chapter.

Deadly wounds are, when a mans *Arboriſt* wanting skill, cuts off armes, boughes or branches an inch, or (as I ſee ſometimes) an handfull, or halfe a foot or more from the body: *theſe ſo cut, cannot cover in any time with ſap, and therefore they dye, and dying they periſh the heart, and ſo the tree becomes hollow, and with ſuch a deadly wound cannot live long.* Wounds. Remedy.

The remedy is, if you find him before he be periſhed, cut him cloſe, as in the 11. Chapter: if he be hoal'd, cut him cloſe, fill his wounds though never ſo deep, with morter well tempered, and ſo cloze at the top his wonnd with a Sear-cloth nailed on that no Ayr nor Rain approach his wound. If he be very old and declining, he will recover: and the hole being cloſed, his wound within ſhall not hurt him for many years.

Hurts on your trees are chiefly, Ants, Earwigs, and Caterpillars. Of Ants and Earwigs is ſaid, Chap. 10. *Let there be no ſwarm of piſ-mire neer your tree roots, no not in your Orchard: turn them over in a froſt, and pour in water, and you kill them.*

For *Caterpillers*, the vigilant Fruiterer ſhall ſoone eſpy their lodging by their web, or the decay of leaves eaten round about them. And being ſeen, they are eaſily deſtroyed with your hand,

or rather (if your tree may ſpare it) take ſprig and all: for the red ſpeckled Butter-fly doth ever put them, being her ſperm, among the tender ſprays for better feeding; eſpecially in drought: and tread them under your feet. I like nothing of ſmoak among trees. Unnaturall heats are nothing good for naturall trees. *This, for Diſeaſes of particular trees.*

Externall hurts are either things naturall, or artificiall. Naturall things, externally hurting Orchards.

1 Beaſts.
1 Deer.
2 Goats.
3 Sheep.
4 Hare.
5 Cony.
6 Cattell.
7 Horſe.

1 1 Birds.
1 Bulfinch.
2 Thruſh.
3 Black-bird.
4 Crow.
5 Pye,
&c.

The other things are.

1 Winds.
2 Cold.
3 Trees.
4 Weeds.
5 Wormes.
6 Moles.
7 Filth.
8 Poyſonfull ſmoke.

Externall wilfull evills are theſe.

1 Walls.
2 Trenches.
3 Other works noiſome, done in or neer your Orchard.
4 Evill Neighbours.
5 A careleſſe Maſter.
6 An undiſcreet, negligent, or no keeper.

See you here an whole Army of miſchiefes banded in troops againſt the moſt fruitfull trees the earth beares? aſſailing your good labours. Good things have moſt enemies.

Remedy. A skilfull Fruiterer muſt put to his helping hand, and disband and put them to flight.

Deere, &c. For the firſt rank of beaſts, beſides your out ſtrong fence, you muſt have a faire and ſwift Grey-hound, a Stone-bow Gun, and if

if need require, an Apple with an hook for a Deer, and an hare-pipe for an Hare.

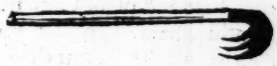
Your Cherries, and other Berries, when they be ripe, will draw all the Black-birds, Truſhes, and Mag-pies, to your Orchard. The Bull-finch is a devourer of your fruit in the bud, I have had whole Trees ſhal'd out with them in Winter time. Birds.

The beſt remedy here is a Stone-Bow, a Piece, eſpecially if you have a musket, or ſparrow-hawke in winter to make the Black-bird ſtoop into a buſh or hedge.

The Gardner muſt cleanſe his ſoile of all other trees, but fruit trees, as aforeſaid, *chap.* 2. for which is is ordained; and I would eſpecially name Oaks, Elms, Aſhes, and ſuch other great wood, but that I doubt it ſhould be taken as an admiſſion of leſſer trees, for I admit of nothing to grow in my Orchard but fruit and flowers: if ſap can hardly be good to feed our fruit trees, ſhould we allow of any other? eſpecially thoſe that will become their Maſters, and wrong them in their lively-hood?

And although we admit without the fence, of wall-nuts in moſt plain places, Trees middle moſt, and Aſhes or Oaks, or Elms utmoſt, ſet in comely rowes equally diſtant, with fair Allyes twixt row and row, to avoid the boiſterous blaſts of winds, and within them alſo others for bees, yet we admit none of theſe into your Orchard plat: other remedies then this have we none againſt the nipping froſt. Winds. Froſts.

Weeds in fertile ſoil, (becauſe the generall courſe is ſo) till your trees grow great, will be noiſome, and deform your allies, walks, beds, and ſquares; your under gardeners muſt labour to keep all cleanly and handſome from them, and all other filth, with a ſpade, weeding knives, rake with Iron teeth, a ſcraple of Iron thus formed. Weeds.



For Nettles, and ground Ivy after a ſhower.

When weeds, ſtraw, ſticks, and all other ſcrapings are gathered together, burn them not, but bury them under your cruſt in any place of your Orchard, and they will dye and fatten your ground.

Wormes. Moles.

Wormes and Moales open the earth, and let in ayre to the Roots of your trees, and deform your ſquares and walks; and feeding in the earth, being in number infinite, draw on barrenneſſe.

Remedy.

Wormes may eaſily be deſtroyed. Any Summer evening when it is dark, after a ſhowre with a candle you may fill buſhels, but you muſt tread nimbly, and where you cannot come to catch them, ſo ſift the earth with coal-aſhes an inch or two thickneſſe, and that is a plague to them, ſo is ſharp gravell.

Moales will anger you, if your Gardner or ſome other moal-catcher eaſe you not; eſpecially, having made their fortreſſes among the Roots of your Trees; you muſt watch her well with a Moal-ſpeare, at morning, noon, and night: when you ſee her utmoſt hill, caſt a trench betwixt her and her home, for ſhe hath a principall manſion to dwell and breed in about *April*, which you may diſcern by a principall hill, wherein you may catch her, if you trench it round and ſure, and watch well; or whereſoever you can diſcern a ſingle paſſage, (for ſuch ſhe hath) there trench, and watch, and have her.

Wilfull annoyances muſt be prevented and avoided by the love of the Maſter and Fruiterer, which they bear to their Orchard.

Juſtice and liberality will put away evill neighbours, or evill neighbour-hood. And then, (if God bleſſe and give ſucceſſe to your labours) I ſee not what hurt your Orchard can ſuſtain.

CHAP. XIIII.

The age of Trees.

IT is to be conſidered, All this treatiſe of trees tends to this end, that men may love and plant Orchards, whereunto there cannot be a better inducement then that they know, (or at leaſt be perſwaded) that all the benefit they ſhall reap thereby, whether of pleaſure or profit, ſhall not be for a day, or a moneth, or one, or many, but many hundred years. Of good things, the greateſt, and moſt durable, is alwayes the beſt. If therefore, out of reaſon grounded upon experience, it be made, (I think) manifeſt, but I am ſure probable, that a fruit tree in ſuch a ſoyle and

and fite, as is deſcribed, ſo planted and trimmed, and kept as is afore appointed, and duely ſoiled, ſhall dure a thouſand years, why ſhould we not take pains, and be at two or three years charges, (for under ſeven years will an Orchard be perfected for the firſt planting, and in that time be brought to fruit) to reap ſuch a commodity, and ſo long laſting? The age of trees.

Let no man think this to be ſtrange, but peruſe and conſider the reaſon. I have Apple trees ſtanding in my little Orchard, which I have known theſe fourty years, whoſe age before my time I cannot learn, it is beyond memory, though I have inquired of divers aged men of 80 years and upwards: theſe trees although come into my poſſeſſion very ill ordered, and miſhappen, and one of them wounded to his heart, and that deadly, (for I know it will be his death) with a wound, wherein I might have put my foot into the heart of his bulke, (now it is leſſe) notwithſtanding, with that ſmall regard they have had ſince, they ſo like, that I aſſure my ſelfe they are not come to their grouth by more then two parts of three, which I diſcern not onely by their own grouth, but alſo by comparing them with the bulk of other trees. And I find them ſhort (at leaſt) by ſo many parts in bigneſſe, although I know thoſe other fruit trees to have been much hindred in their ſtature by evill guiding. Here hence I gather thus. Gathered by reaſon out of experience.

If my trees be a hundred years old, and yet want two hundred of their grouth before they leave increaſing, which make three hundred, then muſt we needs reſolve, that this three hundred years are but the third part of a trees life: becauſe, (as all things living beſides) ſo trees muſt have allowed them for their increaſe one third, another third for their ſtand, and a third part of time alſo for their decay. All which time of a tree amounts to nine hundred years; three hundred for increaſe, three hundred for his ſtand, whereof we have the terme [ſtature] and three hundred for his decay: and yet I think, (for we muſt conjecture by comparing, becauſe no one man liveth to ſee the full age of trees) I am within the compaſſe of his age, ſuppoſing alwaies the fore-ſaid means of preſerving his life. Conſider the age of other living Creatures. The Horſe, and moiled Oxe, wrought to an untimely death, yet double the time of their increaſe. Parts of a trees age.

creaſe. A dog likewiſe increaſeth three, ſtands three at leaſt, and in as many (or rather more) decayes.

Mans age. Every living thing beſtowes the leaſt part of his age in his growth, and ſo muſt it needs be with trees. A man comes not to his full growth and ſtrength (by common eſtimation) before thirty years, and ſome ſlender and clean bodies, not till forty: ſo long alſo ſtands his ſtrength, and ſo long alſo muſt he have allowed by courſe of nature to decay. Ever ſuppoſing that he be well kept with neceſſaries, and from and without ſtraine, bruiſes, and all other dominiering diſeaſes. I will not ſay upon true report, that Phyſick holds it poſſible, that a clean body kept by theſe three Doctors, *Doctor Dyet*, *Doctor Quiet* and *Doctor Merryman*, may live neer a hundred years. Neither will I here urge the long years of *Methuſelah*, and thoſe men of that time, becauſe you will ſay, Mans dayes are ſhortned ſince the flood. But what hath ſhortned them? God for mans ſins; but, by means: as want of knowledge, evill Government, Riot, Glutony, Drunkenneſſe, and (to be ſhort) the encreaſe of the curſe, our ſins increaſing in an Iron and wicked age.

Now if a man, whoſe body is nothing (in a manner) but tender rottenneſſe, whoſe courſe of life cannot by any meanes, by Counſell, reſtraint of Lawes or puniſhment, nor hope of praiſe, profit, or eternall glory, be kept within any bounds, who is degenerate clean from his naturall feeding, to effeminate niceneſſe, and cloying his body with exceſs of meat, drink, ſleep, &c. and to whom nothing is ſo pleaſant, and ſo much deſired, as the cauſes of his own death, as idleneſs, luſt, &c. may live to that age: I ſee not but a tree of a ſolid ſubſtance, not damnified by heat or cold, capable of, and ſubject to any kind of ordering or dreſſing, that a man ſhall apply unto him, feeding naturally, as from the beginning, disburdened of all ſuperfluities, eaſed of, and of his owne accord avoiding, the cauſes that may annoy him, ſhould double the life of a man, more then twice told: and yet naturall Philoſophy, and the univerſall conſent of all Hiſtories tell us, that many other living creatures far exceed man in length of years: As the Hart, and the Raven. Thus reporteth that famous *Roterdam* out of *Heſiodus*, and many other Hiſtoriographers. The teſtimony of *Cicero* in his book *De Senectute*, is weighty to this

this purpoſe: that we muſt *in poſteras ætates ſerere arbores*, which can have none other ſenſe, but, that our fruit trees whereof he ſpeaks, can indure for many ages.

What elſe are trees, in compariſon with the earth, but as hairs to the body of a man? And it is certain, without poyſoning, evill and diſtemperate dyet, and uſage, or other ſuch forcible cauſe, the hairs dure with the body. That they be called excrements, it is by reaſon of their ſuperfluous growth: (for cut them as often as you liſt, and they will ſtill come to their naturall length) Not in reſpect of their ſubſtance, and nature. Hairs endure long, and are an ornament, and of uſe alſo to the body, as trees to the earth.

So that I reſolve upon good reaſon, that fruit trees well ordered, may live and like a thouſand years, and bear fruit; and the longer, the more, the greater, and the better, becauſe his vigour is proud and ſtronger, when his years are many. You ſhall ſee old trees put forth their buds and bloſſomes both ſooner and more plentifull then young trees, by much. And I ſenſibly perceive my young trees to inlarge their fruit as they grow greater, both for number and greatneſſe. Young Heifers bring not forth Calves ſo fair, neither are they ſo plentifull to milke, as when they become to be old Kine. No good Houſ-wife will breed of a young, but of an old breed-mother: It is ſo in all things naturally, therefore in trees.

And if fruit trees laſt to this age, how many ages is it to be ſuppoſed, ſtrong, and huge timber trees will laſt? whoſe huge bodies require the years of divers *Methuſelaes*, before they end their dayes, whoſe ſap is ſtrong and bitter, whoſe barke is hard and thick, and their ſubſtance ſolid and ſtiffe: all which, are defences of health and long life. Their ſtrength withſtands all forcible winds, their ſap of that quality is not ſubject to wormes and tainting. Their bark receives ſeldome or never by caſualty, any wound. And not only ſo, but he is free from removals, which are the death of millions of trees, whereas the fruit-tree in compariſon, is little and often blown down, his ſap ſweet, eaſily, and ſoon tainted, his bark tender, and ſoon wounded, and himſelf uſed by man, as man uſeth himſelf, that is, either unskilfully or careleſſely. The age of Timber trees.

It

Age of trees diſcerned. It is good for ſome purpoſes, to regard the age of your fruit trees, which you may eaſily know, till they come to accompliſh twenty years, by his knots: Reckon from his Root upward an arme, and ſo to his top twig, and every years grouth is diſtinguiſhed from other by a knot, except lopping or removing do hinder.

CHAP. XV.

Of gathering and keeping Fruit.

Generall rule. ALthough it be an' eaſie matter, when God ſhall ſend it, to gather and keep fruit, yet are there certaine things worthy your regard. You muſt gather your fruit when it is Ripe, and not before, elſe will it wither, and be tough and ſowre. All fruits generally are Ripe, when they begin to fall. For trees doe as all other bearers doe, when their young ones are Ripe, they will wain them. The Dove her Pigeons, The Coney her Rabbets, and Women their Children. Some fruit-trees ſometimes getting a taint in the ſetting with a froſt or evill wind, will caſt his fruit untimely, but not before he leave giving them ſap, or they leave growing. Except from this fore-ſaid rule, Cherries, Damſons, and Bullyes. The Cherry is Ripe when he is ſwelled wholly Red, and ſweet. Damſons and bullies not before the firſt froſt.

Cherries, &c.

Apples. Apples are known to be Ripe, partly by their colour growing towards a yellow, except the Leather-coate, and ſome Peares, and greenings.

When. Timely Summer fruit will be ready, ſome at Midſummer, moſt at Lammas for preſent uſe; but generally no keeping fruit before *Michaeltide*. Hard winter fruit, and Wardens longer.

Gather at the full of the Moon, for keeping, gather dry for fear of Rotting.

Dry ſtalkes. Gather the ſtalks withall: for a little wound in fruit is deadly, but not the ſtump, that muſt bear the next fruit; nor leaves, for moiſture putrifies.

Severally. Gather every kind ſeverally by it ſelf, for all will not keep alike, and it is hard to diſcern them, when they are mingled.

Over-laden trees. If your trees be over-laden, (as they will be, being ordered, as is before taught) I like better of pulling ſome off, (tho'gh they be

be not ripe) neer the top end of the bough, then of propping by much, the reſt ſhall be better fed. Propping puts the boughs in danger, and frets it at leaſt.

Inſtruments : A long Ladder of light Fir, a Stoole ladder as in the eleventh Chapter. A gathering-apron like a poak before you, made of purpoſe, or a Wallet hung on a bough, or a baſket with a ſieve bottome, or skin bottome, with lathes or ſplinters under, hung in a rope to pull up and down : bruiſe none, every bruiſe is to fruit, death: if you do, uſe them preſently ; an hook to pull boughs to you is neceſſary, break no boughs. Inſtruments. Bruiſes.

For keeping, lay them in a dry loft, the longeſt keeping Apples firſt and furtheſt on dry ſtraw, on heaps, ten or fourteen dayes, thick, that they may ſweat. Then dry them with a ſoft and clean cloth, and lay them thin abroad. Long keeping fruit would be turned once in a month ſoftly : but not in, nor immediatly after froſt. In a loft, cover'd well with ſtraw, but rather with chaffe or bran: For froſt doth cauſe tender rottenneſs. Keeping.

CHAP. XVI.

Of Profits.

NOw pauſe with your ſelfe, and view the end of all your Labours in an Orchard : unſpeakable pleaſure, and infinite commodity. The pleaſure of an Orchard I refer to the laſt Chapter, for the concluſion; and in this Chapter, a word or two of the profit, which thorowly to declare is paſt my skill ; & I account it as if a man ſhould attempt to adde light to the Sun with a candle, or number the ſtarres. No man that hath but a mean Orchard or judgment but knowes, that the commodity of an Orchard is great : Neither would I ſpeak of this, being a thing ſo manifeſt to all: but that I ſee, that through the careleſneſſe of men, it is a thing generally neglected. But let them know, that they loſe hereby the chiefeſt good which belongs to houſe-keeping.

Compare the Commodity that commeth of half an acre of ground, ſet with fruit-trees and hearbs, ſo as is preſcribed, and an whole acre (ſay it be two) with corn, or the beſt commodity you can wiſh, and the Orchard ſhall exceed by divers degrees.

In *France* and ſome other Countries, and in *England*, they make great uſe of Cider and Perry, thus made : dreſſe every apple, the ſtalke, upper end, and all galls away, ſtamp them, and Cyder and Perry.

ſtrain them, and within twenty four hours tun them up into clean, ſweet, and ſound veſſels, for fear of evill aire, which they will readily take: and if you hang a poakfull of Cloves, Mace, Nutmegs, Cinamon, Ginger, and peels of Lemons in the middeſt of the veſſel, it will make it as wholſome and pleaſant as Wine. The like uſage doth Perry require.

Theſe drinks are very wholſome; they cool, purge, and prevent hot agues. But I leave this skill to Phyſicians.

Fruit. The benefit of your Fruit, Roots, and Herbs, though it were but to eat and ſell, is much.

Water. Water diſtilled of Roſes, Woodbind, Angelica, are both profitable, and wondrous pleaſant, and comfortable. Saffron and Lycoras will yeeld you much.

Conſerves. Conſerves, and preſerves, are ornaments to your feaſts, health in your Sickneſſe, and a good help to your friend, and to your purſe.

He that will not be moved with ſuch unſpeakable profits, is well worthy to want, when others abound in plenty of good things.

CHAP. XVII.

Ornaments.

ME thinks hitherto we have but a bare Orchard for fruit, and but half good, ſo long as it wants thoſe comely Ornaments that ſhould give beauty to all our labours, and make much for the honeſt delight of the owner and his friends.

Delight the chief end of Orchards. For it is not to be doubted, but as God hath given man things profitable, ſo hath he allowed him honeſt comfort, delight, and recreation in all the works of his hands. Nay, all his labours under the Sun without this are troubles, and vexations of mind: For what is greedy gain, without delight, but moyling, and turmoiling in ſlavery? But comfortable delight, with content, is the good of every thing, and the pattern of heaven. A morſel of bread with comfort, is better by much than a fat Oxe with unquietneſſe. And who can deny but the Principal end of an Orchard, is the honeſt delight of one wearied with the works of his lawfull calling? The very works of, and in an Orchard and Garden, are better than the eaſe and reſt of, and from other labours. When God had made a man after his own image,

An Orchard delightſome.

Image, in a perfect ſtate, and would have him to repreſent himſelf in authority, tranquillity, and pleaſure upon the earth, he placed him in *Paradiſe*. What was *Paradiſe*? but a Garden, an Orchard of trees and hearbs, full of pleaſure? and nothing there but delights. The gods of the earth reſembling the great God of heaven in authority, Majeſty, and abundance of all things, wherein is their moſt delight? and whither do they withdraw themſelves from the troubleſome affaires of their eſtate, being tyred with the hearing and judging of litigious controverſies, choaken (as it were) with the cloſe ayr of their ſumptuous buildings, their ſtomacks cloyed with variety of Banquets, their eares filled and over-burthened with tedious diſcourſings? whither? but into their Orchards? made and prepared, dreſſed and deſtinated for that purpoſe, to renew and refreſh their ſenſes, and to call home their over-wearied ſpirits. Nay, it is (no doubt) a comfort to them, to ſet open their caſements into a moſt delicate Garden and Orchard, whereby they may not only ſee that, wherein they are ſo much delighted, but alſo to give freſh, ſweet and pleaſant aire to their Galleries and Chambers.

An Orchard in Paradiſe.

Cauſe of wearineſſe.

Orchard is the remedy.

And look what theſe men do by reaſon of their greatneſſe and ability, provoked with delight, the ſame doubtleſſe would every of us do, if power were anſwerable to our deſires: whereby we ſhew manifeſtly, that of all other delights on earth, they that are taken by Orchards are moſt excellent, and moſt agreeing with nature.

All delight in Orchards.

For whereas every other pleaſure commonly fills ſome one of our ſenſes, and that only with delight; this makes all our ſenſes ſwim in pleaſure, and that with infinite variety, joyned with no leſſe commodity.

This delights all the ſenſes.

That famous Philoſopher, and matchleſſe Oratour, *M. T. C.* preſcribeth nothing more fit, to take away the tediouſneſſe of three or fourſcore yeers, than the pleaſure of an Orchard.

Delighteth old age.

What can your eye deſire to ſee, your eares to heare, your mouth to taſte, or your noſe to ſmell, that is not to be had in an Orchard, with abundance of variety? What more delightſome than an infinite variety of ſweet ſmelling flowrs; decking with ſundry colours, the green mantle of the earth, the univerſall mo-

Cauſes of delight in any Orchard.

mother of us all, ſo by them beſpotted, ſo dyed, that all the World cannot ſample them, and wherein it is more fit to admire the Dyer, than imitate his workmanſhip, colouring not onely the earth, but decking the aire, and ſweetning every breath and ſpirit.

Flowers. The Roſe red, Damask, Velvet, and double double Province Roſe, the ſweet musk Roſe double and ſingle, the double and ſingle white Roſe: The fair and ſweet ſenting Woodbine, double and ſingle, and double double. Purple Cowſlips, and double Cowſlips, and double double Cowſlips; Primroſe double and ſingle. The Violet nothing behind the beſt, for ſmelling ſweetly. A thouſand more will provoke your content.

Borders and ſquares. And all theſe by the skill of your Gardner, ſo comelily and orderly placed in your borders and ſquares, and ſo intermingled, that one looking thereon cannot but wonder, to ſee, what nature corrected by Art, can do.

Mounts. When you behold in divers corners of your Orchard *Mounts* of ſtone or wood, curiouſly wrought within and without, or of earth covered with fruit trees, Kentiſh Cherries, Damſons, Plums, &c. with ſtaires of precious Workmanſhip; and in ſome corner (or moe) a true Dial or Clock, and ſome Antick works; and eſpecially ſilver ſounding Muſicke, mixt inſtruments, and voyces, gracing all the reſt: How will you be wrapt with Delight?

Whence you may ſhoot a Buck. Dial. Muſick.

Walks. Large Walks, broad and long, cloſe and open, like the *Tempe*-groves in *Theſſaly*, raiſed with gravell and ſand, having ſeats and bank; of Camomile; all this delights the mind, and brings health to the body.

Seats.

Order of trees. View now with delight the works of your own hands, your fruit trees of all ſorts, loaden with ſweet bloſſoms, and fruit of all taſtes, operations and colours: your trees ſtanding in comely order which way ſoever you look.

Your borders on every ſide hanging and drooping with Feberries, Raſpberries, Barberries, Currans; and the Roots of your trees powdred with Strawberries, Red, White and Green, what a pleaſure is this? Your Gardner can frame your leſſer wood to the ſhape of men armed in the field, ready to give battel: of ſwift running Greyhounds, or of well ſented and true Running

Shape of men and beaſts.

Hounds

Hounds to chaſe the Deer, or hunt the Hare. This kind of hunting ſhall not waſte your corn; nor much, your coyn.

Mazes well framed a mans height, may perhaps make your friend wander in gathering of berries till he cannot recover himſelf without your help. Mazes.

To have occaſion to exerciſe within your Orchard, it ſhall be a pleaſure to have a bowling Alley, or rather (which is more manly, and more healthfull) a pair of Butts, to ſtretch your Armes. Bowling-Alley. Buts.

Roſemary and ſweet Eglantine are ſeemly Ornaments about a Door or Window, and ſo is Woodbine. Herbes.

Look Chap 15 and you ſhall ſee the form of a Conduit. If there were two or more, it were not amiſs. Conduit.

And in mine own opinion I could highly commend your Orchard, if either through it, or hard by it, there ſhould run a pleaſant River with ſilver ſtreams: you might ſit in your Mount, and Angle a peckled Trout, ſlighty Eele, or ſome other dainty Fiſh. Or moats, whereon you may row with a Boat, and fiſh with Nets. River. Moats.

Store of Bees in a dry and warm Bee houſe, comely made of Firr buards to ſing, and ſit, and feed upon your flowers and ſprouts, make a pleaſant noyſe and ſight. For cleanly and innocent Bees, of all other things, love and become, and thrive in an Orchard. If they thrive (as they muſt needs, if your Gardener be skilfull, and love them; for they love their friends, and hate none but their enemies) they will beſides the pleaſure, yield great profit to pay him his wages. Yea, the increaſe of twenty Stocks or Stools with other fees, will keep your Orchard. Bees.

You need not doubt their ſtings, for they hurt not whom they know, and they know their Keeper and acquaintance. If you like not to come among them, you need not doubt them: for but neer their ſtore, and in their own defence, they will not fight, and in that caſe only (and who can blame them?) they are manly, and fight deſperately. Some (as that honourable Lady at *Hacknes*, Whoſe name doth much grace mine Orchard) uſe to make ſeats for them in the ſtone walls of their Orchard, or Garden, which is good, but wood is better.

A Vine over-ſhadowing a ſeat, is very comly, though her Grapes with us ripen ſlowly. Vine.

One

Birds. Nightingale.

One chief grace that adorns an Orchard, I cannot let ſlip: a brood of Nightingalls, who with ſeveral notes and tunes, with a ſtrong delightſome voyce out of a weak body, will beare you company night and day. She loves (and lives in) hots of woods in her heart. She will help you to cleanſe your trees of Caterpillers, and all noyſome wormes and flyes. The gentle Robin-red-breſt will help her, and in winter in the coldeſt ſtorms will keep a part. Neither will the ſilly Wren be behind in Summer, with her diſtinct whiſtle, (like a ſweet Recorder) to chear your ſpirits.

Robin Red-breſt. Wren.

Black-bird. Thruſh.

The Black-bird and Threſtle (for I take it, the Thruſh ſings not, but devours) ſing loudly in a *May* morning, and delights the eare much, and you need not want their company, if you have ripe Cherries or Berries, and would as gladly as the reſt doe your pleaſure: but I had rather want their company than my fruit.

What ſhall I ſay? A thouſand of pleaſant delights are attending an Orchard: and ſoover ſhall I be vveary, than I can reckon the leaſt part of that pleaſure which one that hath, and loves an Orchard, may find therein.

What is there of all theſe few that I have reckoned, which doth not pleaſure the eye, the ear, the ſmell, and taſte? And by theſe ſenſes, as Organs Pipes, and windows, theſe delights are carried to refreſh the gentle, generous, and noble mind.

Your own labour.

To conclude, what joy may you have, that you living to ſuch an age, ſhall ſee the bleſſing of God on your labours while you live, and leave behind you to heirs, or ſucceſſors (for God will make heirs) ſuch a work, that many ages after your death, ſhall record your love to their Country? And the rather, when you conſider (Chap. 14.) to what length of time your work is to laſt.

FINIS:

THE *COUNTRY HOUSE-WIVES* GARDEN,

Containing rules for Herbs, and Seeds, of common uſe, with their times and ſeaſons when to ſet and ſow them.

Together

With the Husbandry of Bees, publiſhed with ſecrets very neceſſary for every *Houſwife*: As alſo divers new Knots for Gardens.

The Contents ſee at large, in the laſt Page.

Geneſ. 2. 29.

I have given unto you every Herbe, and every Tree, that ſhall be to you for meat.





LONDON,
Printed by *William Wilſon*, for *George Sawbridge*, at the Bible on Ludgate-hill, neer Fleet-bridge. 1660.

17,18-38

THE COUNTRY HOUSE-VVIFES GARDEN.

CHAP. I.

The Soyle.

THe Soyl of an Orchard and Garden, differ only in these three poynts: First, the Gardens soil would be somewhat dryer, because herbs being more tender then trees, can neither abide moysture nor drought, in such excessive measure, as trees; and therefore having a dryer soyl, the remedy is easie against drought: if need be, water soundly; which may be done with small labour, the compasse of a Garden being nothing so great, as of an Orchard: and this is the cause (if they know it) that Gardners raise their squares: but if moysture trouble you, I see no remedy without a generall danger, except in Hops, which delight much in a low and sappy earth. Dry. Hops.

Secondly, the soyl of a Garden would be plaine and levell, at least every square, (for we purpose the square to be the fittest form) the reason is, the earth of a garden wanting such helps, as should stay the water, which an orchard hath, & the roots of herbs being

being mellow and looſe, is ſoon either waſht away, or ſends out his heart by too much drenching and waſhing.

Thirdly, If a garden ſoil be not clear of weeds, and namely of graſs, the herbs ſhall never thrive: for how ſhould good herbs proſper, when evill weeds wax ſo faſt: conſidering good herbs are tender in reſpect of evill weeds: theſe being ſtrengthned by nature, and the other by art? Gardens have ſmall place in compariſon, and therefore may more eaſily be followed, at the leaſt one half year before, and the better dreſſed after it is framed. And you ſhall find that clean keeping doth not onely avoid danger of gathering weeds, but alſo is a ſpeciall ornament, and leaves more plentifully ſap for your tender herbs.

CHAP. II.

Of the Sites.

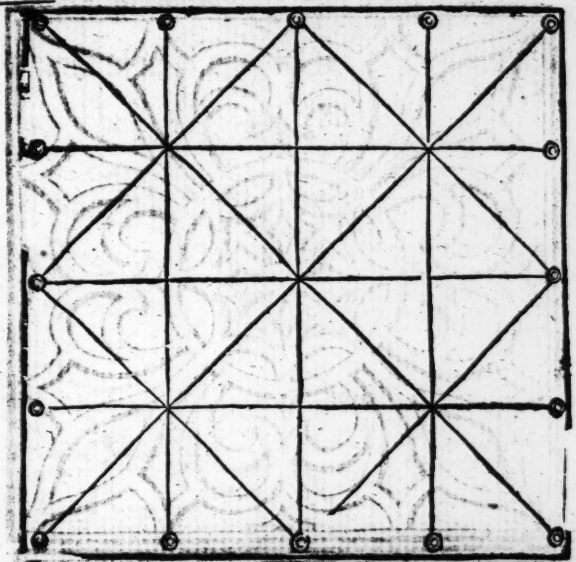
I Cannot ſee in any ſort, how the ſite of the one ſhould not be good, and fit for the other: The ends of both being one, good, wholeſome, and much fruit joyned with delight, unleſſe trees be more able to abide the nipping froſts than tender herbs: but I am ſure, the flowers of trees are as ſoon periſhed with cold: as any herbe except Pumpion, and Melons.

CHAP. III.

Of the Forme.

LEt that which is ſaid in the Orchards forme, ſuffice for a Garden in generall: but for ſpeciall formes in ſquares, they are as many, as there are devices in Gardners braines. Neither is the wit and art of a skilfull Gardner in this point not to be commended, that can work more variety for breeding of more delightſome choice, and of all thoſe things, where the owner is able and deſirous to be ſatisfied. The number of forms, Mazes, and Knots is ſo great, and men are ſo diverſly delighted, that I leave every Houſe-wife to her ſelf, eſpecially ſeeing to ſet down many, had been but to fill much paper; yet leſt I deprive her of all delight and direction, let her view theſe few, choiſe new formes; and note this generally, that all plots are ſquare, and all are bordered about with Privit, Raiſins, Fea-berries, Roſes, Thorne, Roſemary, Bee-flowers, Hop, Sage, or ſuch like.

CHAP.

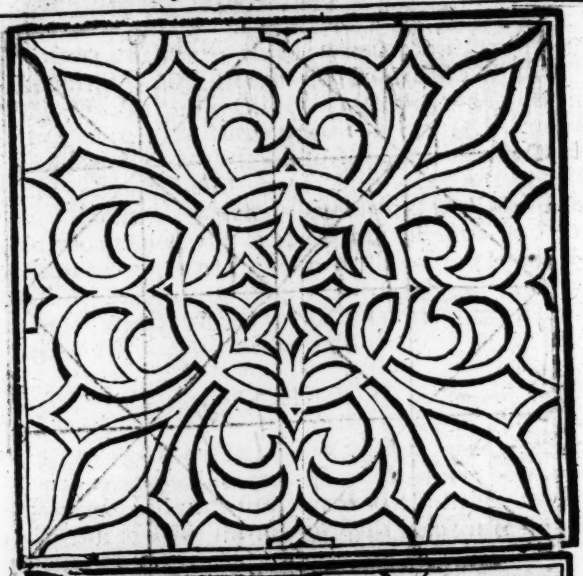


The ground plot for knots.

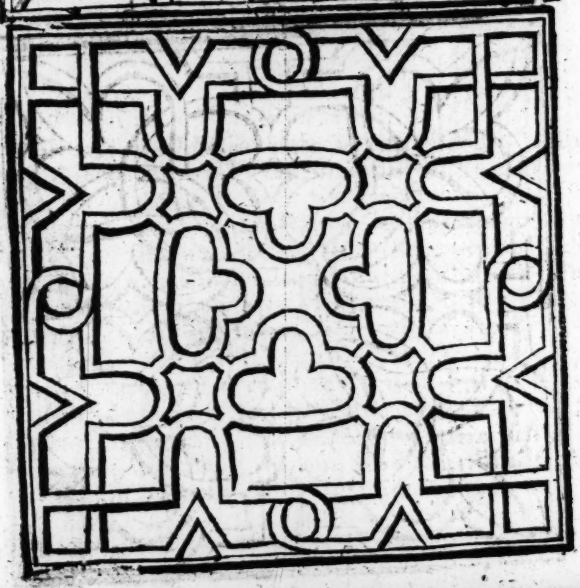


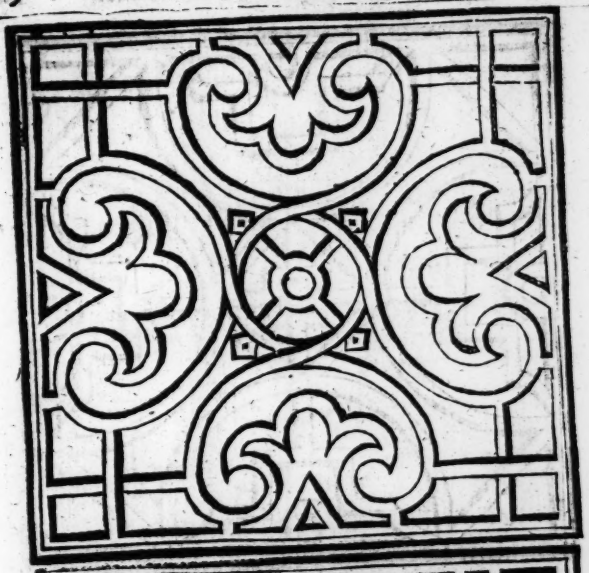
Cinkfoile.

Flower deluce.

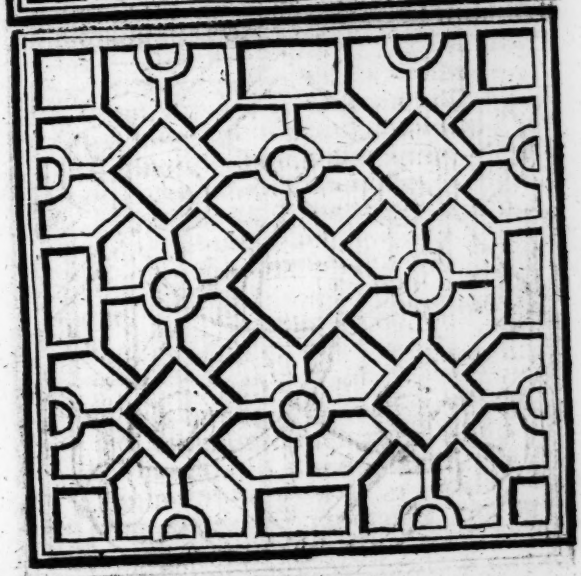


The Trefoyle.





The Fret.

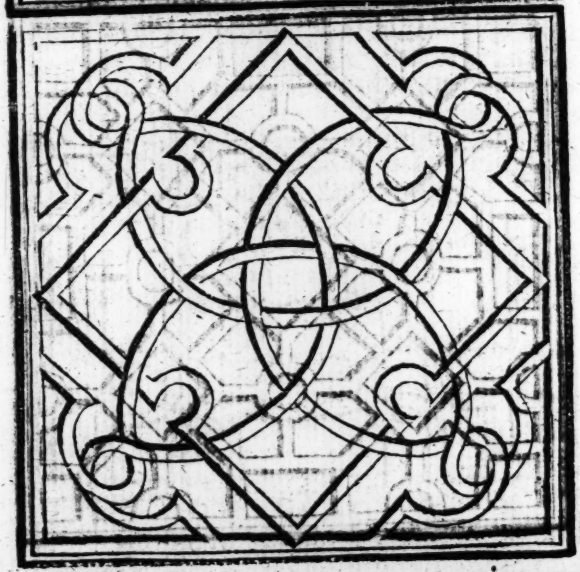


Lozenges.

Croſſe-bow.



Diamond.





Ovall.

Maze.

CHAH. IV.
Of the Quantity.

A Garden requireth not ſo large a ſcope of ground as an Orchard, both in regard of the much weeding, dreſſing, and removing, and alſo the pains in a Garden is not ſo well repayed home, as in an Orchard: It is to be granted, that the Kitchin garden doth yield rich gains, by Berries, Roots, Cabbages, &c. yet theſe are no way comparable to the fruit of a Rich Orchard: But notwithſtanding I am of opinion, that it were better for *England* that we had more Orchards and Gardens, and more large. And therefore, we leave the quantity to every mans ability and will.

CHAP. V.
Of Fence.

SEeing we allow Gardens in Orchard plots, and the benefit of a Garden is much, they both require a ſtrong and ſhrowding fence. Therefore leaving this, let us come to the Herbs themſelves, which muſt be the fruit of all theſe labours.

CHAP. VI.
Of two Gardens.

HErbes are of two ſorts, and therefore it is meet, (they requiring diverſe manners of Husbandry) that we have two Gardens: A garden for flowers, and a Kitchin garden: or a Summer garden: not that we mean ſo perfect a diſtinction, that we meane the Garden for flowers ſhould or can be without herbs good for the Kitchin, or the Kitchin garden ſhould want flowers, nor on the contrary: but for the moſt part they would be ſevered: firſt, becauſe your Garden flowers ſhall ſuffer ſome diſgrace, if among them you intermingle Onions Parſnips, &c. Secondly, your Garden that is durable, muſt be of one form: but that which is your Kitchens uſe, muſt yield daily Roots, or other herbs, and ſuffer deformity. Thirdly, the herbs of both will not be both alike ready, at one time, either for gathering, or removing. Firſt therefore

Of

Of the Summer Garden.

THeſe herbs and flowers are comely and durable for ſquares & Knots, and all to be ſet at *Michael-tide*, or ſomewhat before; that they may be ſetled in, and taken with the ground before winter; though they may be Set, eſpecially ſown, in the ſpring.

Roſes of all ſorts, (ſpoken of in the Orchard) muſt be Set: Some uſe to Set ſlips and twine them, which ſometimes, but ſeldome, thrive all.

Roſemary, Lavender, Bee-flowers, Iſop, Sage, Time, Cowſlips, Pyony, Dalſies, Clove Gilliflowers, Pinks, Sothernwood, Lillies, of all which hereafter.

Of the Kitchin Garden.

THough your Garden for flowers doth in a ſort peculiarly challenge to it ſelf a perfit, and exquiſite form to the eyes, yet you may not altogether neglect this, where your herbs for the pot do grow. And therefore ſome here make comely borders with the herbs aforeſaid. The rather, becauſe abundance of Roſes and Lavender, yield much profit, and comfort to the ſences: Roſe water, Lavender, the one cordiall (as alſo the Violets, Burrage, and Bugloſs) the other reviving the ſpirits by the ſence of ſmelling: both moſt durable for ſmell, both in flowers and water: you need not here raiſe your beds, as in the other Garden, becauſe Summer towards, will not let too much wet annoy you, and theſe herbs require more moyſture: yet muſt you have your beds divided, that you may go betwixt to weed, and ſomewhat of form would be expected: To which it availeth that you place your herbs of biggeſt growth, by walles, or in borders, as Fennell, &c. and the loweſt in the middeſt, as Saffron, Strawberries, Onions, &c.

CHAP. VII.

Diviſion of Herbs.

GArden herbs are innumerable, yet theſe are common, and ſufficient for our Country-houſwives.

Herbs of greateſt growth.

Fennell, Angelica, Tanſie, Hollihock, Lovage, Elicampane, French Mallowes, Lillies, French Poppy, Endive, Succory, and Clary.

Herbs of middle growth.

Burrage, Bugloſſe, Parſly, Sweet Sicily, Flower-deluce, Stock Gilli-flowers, Wall-flowers, Anniſeeds, Coriander, Fether-few, Mary-golds, Oculus Chriſti, Langdibeef, Alexanders, Carduus-benedictus.

Herbs of ſmalleſt growth.

Panſie, or Harts-eaſe, Coaſt-Marjoram, Savory, Straw-berries, Saffron, Lycoras, Daffadowndillies, Leeks, Chives, Chibbals, Skerots, Onions, Batchelors buttons, Daſies, Peniroyall.

Hitherto, I have only reckoned up, and put in this rank, ſome Herbs: their Husbandry followes, each in an Alphabetical order, the better to be found.

CHAP. VIII.

Husbandry of Herbs.

ALexanders, are to be renewed as Angelica. It is a timely Pot-herb.

Angelica is renewed with the ſeed, whereof he beareth plenty the ſecond year, and ſo dyeth. You may remove the roots the firſt year. The leaves diſtilled, yield water, ſoveraign to expell pain from the ſtomack. The Root dryed, taken in the fall, ſtoppeth the pores againſt infections.

Anniſeeds: make their growth, and bear ſeeds the firſt yeare, and dieth as Coriander: it is good for opening the pipes, and it is uſed in Comfits.

Artichoakes: are renewed by dividing the Roots into Sets, in *March*, every third or fourth year. They require a ſeverall uſage, and therefore a ſeverall whole plot by themſelves, eſpecially, conſidering they are plentifull of fruit much deſired.

Burrage and Bugloſſe: two Cordials renew themſelves by ſeed yearly, which is hard to be gathered, they are exceeding good Pot-herbs, good for Bees, and moſt comfortable for the heart and ſtomack, as Quinces and Wardens.

Camomile: ſet roots in banks and walks, it is ſweet ſmelling, qualifying head-ach.

Cab-

Cabbages: require great room, they seed the second year, sow them in *February*, remove them when the plants are an handfull long, set deep and wet. Look well in drought for the white Caterpillars worm, the spannes under the leaf closely: for every living Creature doth seek food and quiet shelter, and growing quick they draw to, and eat the heare: you may find them in a rainy dewy morning.

It is a good Pot-herbe, and of this herbe called *Cole*, our Country Housewifes give their pottage their name, and call them *Caell*.

Carduus Benedictus, or blessed thistle: seeds and dyes the first year, the excellent vertue thereof, I referr to Herballs, for we are Gardiners, not Physicians.

Carrets are sown late in *Aprill* or *May*, as Turneps, else they seed the first year, and then their roots are naught: the second year they dye, their roots grow great, and require large room.

Chibals or Chives, have their roots parted, as Garlick, Lillies, &c. and so are they set every third or fourth year: a good pot-herbe, opening, but evill for the eyes.

Clary: is sown, it seeds the second year, and dyes. It is somewhat harsh in tast, a little in pottage is good, it strengtheneth the reines.

Coast, Root parted, makes Sets in *March*: it bears the second year: it is used in Ale in *May*.

Coriander: is for usage and uses, much like Anniseeds.

Daffadowndillies: have their roots parted and set once in three or four year or longer time. They flower [illegible], and after *Midsummer* are scarcely seen. They are more for ornament, then for use, so are Daisies.

Daisie roots parted and Set, as Flower-deluce and Camomile, when you see them grow too thick or decay. They be good to keep up, and strengthen the edges of your borders, as Pinks, they be red, white, mixt.

Ellicampane Root is long lasting, as is the Lovage: it seeds yearly, you may divide the Root, and set; the Root taken in winter it is good, (being dryed, powdered, and drunk) to kill itches.

Endive and Succory: are much like in nature, shape, and use,

they renew themselves by seed, as Fennell, and other herbs. You may remove them before they put forth shanks: a good Pot-herbe.

Fennell is renewed, either by the seeds (which it beareth the second year, and so yearly in great abundance) sown in the fall or Spring; or by dividing one Root into many Sets, as Artichoke. It is long of growth and life. You may remove the root unshankt: It is exceeding good for the eyes, distilled, or any otherwise taken: it is used in dressing Hives for swarmes; a very good Pot-herbe, or for Sallets.

Fether-few shakes seed. Good against a shaking Fever, taken in a posset drink fasting.

Flower-deluce, long lasting. Divide his roots, and Set: the roots dryed have a sweet smell.

Garlick may be Set an handfull distance, two inches deep, in the edge of your beds. Part the head into severall cloves, and every clove, set in the latter end of *February*, will increase to a great head before *September*: good for opening, evill for eyes: when the blade is long, fast two and two together, the heads will be bigger.

Hollihock riseth high, seedeth and dyeth, the chief use I know is ornament.

Isop is reasonable long lasting: young Roots are good Set, slips better. A good pot-herbe.

July-flowers, commonly called Gilly-flowers, or Clove July-flowers, (I call them [illegible] because they flower in *July*) they have the name of Cloves, [illegible]ent. I may well call them the King of flowers except the [illegible], & the best sort of them are called Queen-July flowers. I have of them nine or ten severall colours, and divers of them as big as Roses; of all flowers (save the Damask Rose) they are the most pleasant to sight and smell: they last not past three or four years unremoved. Take the slips (without shanks) and Set any time save in extream frost, but especially at *Michael-tide*. Their use is much in ornament, and comforting the spirits, by the sense of smelling.

July-flowers of the wall, or wall July-flowers, Wall-flowers, or Bee-flowers, or Winter-July-flowers, because growing in the walls even in winter, and good for Bees, will grow even in stone-

walls,

walls, they will ſeem dead in Summer, and yet revive in Winter, they yield ſeed plentifully, which you may ſow at any time, or in any broken earth, eſpecially on the top of a mud-wall, but moiſt, you may ſet the root before it be brancht, every ſlip that is not flowr'd will take root, or crop him in Summer, and he will flower in Winter, but his winter ſeed is untimely. This and Palmes are exceeding good, and timely for Bees.

Leeks yield ſeed the ſecond year, unremoved; and dye, unleſſe you remove them, uſually to eat with Salt and Bread, as Onyons alwayes green, good pot-herb, evill for the eyes.

Lavender-ſpike would be removed within ſeven yeares, or eight at the moſt: ſlips twined, as Hyſope and Sage, would take beſt at *Michael-tide*. This flowre is good for Bees, moſt comfortable for ſmelling, except Roſes: and kept dry, is as ſtrong after a year, as when it is gathered. The water of this is comfortable.

White *Lavender* would be removed ſooner.

Lettice yelds ſeed the firſt year, and dyes: ſow betime; and if you would have them Cabbage for ſallets, remove them as you do Cabbage. They are uſuall in Sallets and in the pot.

Lilies white and red, remove once in three or four years, their roots yield many Sets, like the Garlick. *Michael-tide* is the beſt. They grow high, after they get root. Theſe roots are good to break a byle, as are Mallows and Sorrel.

Mallowes, French or gagged, the firſt or ſecond year, ſeed plentifully. Sow in *March*, or before. They are good for the houſewifes pot, or to break a bunch.

Marigolds, moſt commonly come of ſeed, you may remove the Plants, when they be two inches long. The double Marigold, being as bigge as a little Roſe, is good for ſhew. They are a good Pot-herbe.

Oculus Chriſti, or Chriſts-eye, ſeeds, and dyes the firſt or ſecond year: you may remove the young Plants, but ſeed is better. One of theſe ſeeds put into the eye, within three or four houres will gather a thick skinne, clear the eye, and bolt it ſelfe forth without hurt to the eye. A good Pot-herbe.

Onyons are ſown in *February*, they are gathered at *Michael-tide*, and all the Summer long, for Sallet; as alſo young parſly,

Sage,

Sage, Chibals, Lettice, ſweet Sicily, Fennell, &c. good alone, or with meat, as muttons, &c. for ſawce, eſpecially for the pot.

Parſly ſow the firſt year, and uſe the next year: it ſeeds plentifully, an herb of much uſe, as ſweet Sicily is. The ſeed and roots are good againſt the ſtone.

Parſneps require an whole plot, they be plentifull and common, ſow them in *February*, the Kings (that is in the middle) ſeed broadeſt and reddeſt. Parſneps are ſuſtenance for a ſtrong ſtomack, not good for evill eyes: When they cover the earth, in a drought to tread the tops, makes the Roots bigger.

Penny-royall, or pudding graſſe, creeps along the ground, like ground Ivy. It laſts long, like daiſies, becauſe it puts and ſpreads daily new roots. Divide, and remove the roots, it hath a pleaſant taſt and ſmel, good for the pot, or hacketmeat, or Haggas pudding.

Pumpions: Set Seeds with your finger, a finger deep, late in *March*, and ſo ſoon as they appear, every night if you doubt froſt, cover them, and water them continually out of a water pot: they be very tender, their fruit is great and waterish.

French Poppy beareth a great flower, and the ſeed will make you ſleep.

Raddiſh is ſauce for cloyed ſtomacks, as Capers, Olives, and Cucumbers: caſt the ſeeds all ſummer long here and there, and you ſhall have them alwayes young and freſh.

Roſemary, the grace of herbs here in England, in other Countries common. To ſet ſlips immediately after *Lammas*, is the ſureſt way. Seed ſown may prove well, ſo they be ſown in hot weather, ſomewhat moyſt, and good earth: for the herb, though great, is neſh and tender (as I take it) brought from hot Countries to us in the cold North: ſet thin, it becomes a window well. The uſe is much in meats, more in Phyſick, moſt for Bees.

Rue, or herb of grace, continually green, the ſlips are ſet. It laſts long, as Roſemary, Sothernwood, &c. too ſtrong for mine Houſewifes pot, unleſſe ſhe will brew Ale therewith, againſt the plague: let them not ſeed if you will have him laſt.

Saffron, every third year his roots would be removed at *Midſummer*, for when all other herbs grow moſt, it dyeth. It flowreth at *Michael-tide*, and groweth all winter: keep his flowers from birds in the morning, and gather the yellow, (for they

they ſhape much like Lillies) dry, and after dry them: they be pretious, expelling diſeaſes from the heart and ſtomack.

Savery: ſeeds and dyes the firſt year, good for my Houſewifes pot and pye.

Sage: ſet ſlips in *May*, and they grow aye; let it not ſeed, it will laſt the longer. The uſe is much and common. The Monkiſh proverb is *tritum*.

Cur moritur homo, cui ſalvia creſcit in horto?

Skerets: the Roots are ſet when they be parted, as *Pionie*, and Flower-deluce at *Michael-tide*, the Root is but ſmall and very ſweet, I know none other ſpeciall uſe but the Table.

Sweet *Sicely*: long laſting, pleaſantly taſting, either the ſeed ſown, or the root parted, and removed, makes increaſe, it is of like uſe with parſley.

Strawberries: long laſting, ſet Roots at *Michael-tide*, or the Spring, they be red, white, and green, and ripe, when they be great and ſoft, ſome by *Midſummer with us*. The uſe is, they will cool my Houſewife well, if they be put in Wine or Creame with Sugar.

Time: both ſeeds, ſlips, and Roots are good, if it ſeed not, it will laſt three or four years or more, it ſmelleth comfortably. It hath much uſe, namely in all cold meats, it is good for Bees.

Turnep: is ſown. In the ſecond year they bear plenty of ſeed; they require the ſame time of ſowing that Carrets do; they are ſick of the ſame diſeaſe that Cabbages be. The root increaſeth much, it is moſt wholeſome, if it be ſown in a good and well tempered earth; Soveraigne for eyes and bees.

I reckon theſe herbs onely, becauſe I teach my Country Houſewife, not skilfull Artiſts; and it ſhould be an endleſſe labour, and would make the matter tedious to reckon up *Land-theefe*, *Stock-Gilly-flowers*, *Charvell*, *Valerian*, *Go to bed at noon*, *Piony*, *Lycoras*, *Tanſie*, *Garden mints*, *Germander*, *Centaury*, and a thouſand ſuch Phyſick herbs. Let her firſt grow cunning in this, and then ſhe may inlarge her Garden as her skill and ability increaſeth. And to help her the more, I have ſet down theſe Obſervations.

CHAP.

CHAP. IX.

Generall rules in Gardening.

IN the South parts, Gardening may be more timely, and more ſafely done, then with us in *Yorkſhire*, becauſe our ayr is not ſo favourable, nor our ground ſo good.

2. Secondly, moſt ſeeds ſhakt, by turning the good earth, are renewed, their Mother the earth keeping them in her bowels, till the Sun their Father can reach them with his heat.

3. In ſetting herbs, leave no top more then an handfull above the ground, nor more then a foot under the earth.

4. Twine the roots of thoſe ſlips you ſet, if they will abide it. Gilly flowers are too tender.

5. Set moiſt and ſowe dry.

6. Set ſlips without ſhanks at any time, except at *Midſummer*, and in froſts.

7. Seeding ſpoiles the moſt roots, as drawing the heart and ſap from the root.

8. Gather for the pot and medicines, herbs tender and green, the ſap being in the top, but in Winter the root is beſt.

9. All the herbs in the Garden for flowers would once in ſeven years be renewed, or ſoundly watered with puddle water, except Roſemary.

10. In all your Gardens and Orchards, banks and Seats of Cammomile, Penny-royall, Daiſies and Violets, are ſeemly and comfortable.

11. Theſe require whole plots, Artichokes, Cabbages, Turneps, Parſneps, Onyons, Carrets, and (if you will) Saffron and Skerrits.

12. Gather all your ſeeds, dead, ripe, and dry.

13. Lay not dung to the roots of your herbs, as uſually they do: for dung not melted is too hot even for Trees.

14. Thin ſetting and ſowing (ſo the roots ſtand not paſt a foot diſtance) is profitable, for the herbs will like the better. Greater herbs would have more diſtance.

15. Set and ſow herbs in their time of growth, (except at *Mid-*

ſummer

Summer, for then they are too too tender) but trees in their time of rest.

16 A good Housewife stay, and will gather store of herbs for the pot, about Lammas, and dry them, and pound them, and in winter they will do good service.

Thus have I limned out a Garden to our Country Housewives, and given them Rules for common herbs. If any of them (as sometimes they are) be knotty, I refer them to Chap. 3. The skill and pains of weeding the Garden with weeding knives of fingers, I refer to themselves and their maids, willing them to take the opportunity after a shower of rain. Withall, I advise the Mistris either to be present her self, or to teach her maids to know herbs from weeds.

CHAP. X.

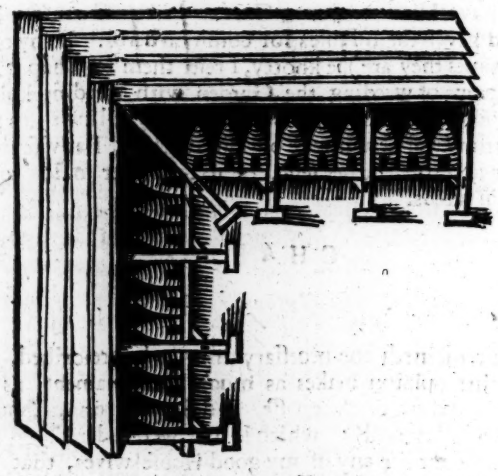
The Husbandry of Bees.

THere remaineth one necessary thing to be prescribed, which in mine opinion makes as much for ornament, as either flowres, or form, or cleanneſse, and is as commodious as any of, or all the rest: which I have well ordered. And I will not account her any of my good House-wives, that wanteth either Bees, or skilfulneſse about them. And though I know some have written well and truly, and others more plentifully upon this theme: yet somewhat have I learned by experience (being a Bee-master my self) which hitherto I cannot find put into writing, for which I think our House Wives will count themselves beholding unto me.

The first thing that a Gardener about Bees must be carefull for, is an house, not stakes and stones abroad, like Bee-houses. for stakes rot and reel, Raine and weather eat your hives and covers, and cold moist of all is hurtfull for your Bees. Therefore you must have an house made along a sure dry wall in your Garden, neer, or in your Orchard: For Bees love flowers and wood with their hearts.

This the form ; a Frame ſtanding on poſts with one floor (if you would have it hold more Hives, two floores) boarded, laid on bearers, and back poſts covered over with boards, flat-wiſe.

Let the floors be without holes or clifts, leſt in caſting time



the Bees lye out and loyter.

And though your Hives ſtand within an handbredth the one of another, yet will Bees know their home.

In this frame may your Bees ſtand dry and warm, eſpecially if you make doores like doores of windowes to ſhroud them in winter, as in an houſe: provided you leave the hives mouth open. I my ſelf have deviſed ſuch an houſe, and I find that it ſtrengthens my Bees much, and my hives will laſt ſix to one.

Hives. Mr. *Markham* commends hives of wood ; I diſcommend them nos: but ſtraw hives are in uſe with us, and I think, with all the world, which I commend for nimbleneſſe, cloſeneſſe, warmeneſſe, and dryneſſe. Bees love no externall motions of daubing, or ſuch like. Sometimes occaſion ſhall be offered to lift and turne hives, as ſhall appear hereafter. One light entire hive

hive of ſtraw, in that caſe, is better then one that is daubed, weighty and cumberſome. I wiſh every hive, for a keeping ſwarme, to hould three pecks at leaſt by meaſure. for too little hives procure bees, in caſting time, either to lye out, and loyter, or elſe to caſt before they be ripe and ſtrong, and ſo make weake ſwarms and untimely : whereas if they have roome ſufficient, they ripen timely, and caſting ſeaſonably, are ſtrong, and fit for labour preſently. Neither would the hive be too great, for then they loyter, and waſte meat and time.

Hiving of Bees.

Your Bees delight in wood, for feeding, eſpecially for caſting therefore want not an Orchard. A *May's* ſwarm is worth a Mares Foal : if they want wood, they be in danger of flying away. Any time before *Midſummer* is good for caſting, and timely; before *July* is not evill. I much like Mr. *Markhams* opinion for having a ſwarm in combs of a dead or forſaken hive, ſo they be freſh and cleanly. To think that a ſwarme of your own, or others, will of it ſelf come into any ſuch hive, is a meer conceit, *Experto crede Roberto*. His ſmearing with hony, is to no purpoſe, for the other Bees will eat it up. If your Swarm knit in the top of a tree, as they will, if the wind beat them not to fall down, let the ſtool or ladder preſcribed in the Orchard do you ſervice.

Spelks.

The leſſe your Spelks are, the leſſe is the waſt of your hony, and the more eaſily will they draw, when you take your Bees. Four Spelks athwart, and one top Spelk are ſufficient. The Bees will faſten their combs to the hive. A little Hony is good, but if you want, Fennel will ſerve to rub your hive withall. The Hive being dreſt and ready ſpelkt, rub'd and the hole made for their paſſage (I uſe no hole in the Hive but a piece of wood hoal'd, to ſave the Hive and keep out mice) ſhake in your Bees, or the moſt of them (for all commonly you cannot get) the remainder will follow. Many uſe ſmoke, nettles, &c. which I utterly diſlike : for Bees love not to be moleſted. Ringing in the time of caſting is a meer fancy, violent handling of them is ſimply evill, becauſe bees of all other creatures love cleanlineſſe and peace. Therefore handle them leiſurely and quietly, and their Keeper whom they know may do with them what he will without hurt : Being hived at night, bring them to their ſeat. Set your hives all of one year together.

Signs of breeding, if they be ſtrong.

1 They will avoid dead young Bees and Droans.

2 They will ſweat in the morning, till it run from them, alwayes when they be ſtrong.

Signes of caſting.

1 They will flye Droans by reaſon of heat.

2 The yonng Swarme will once or twice in ſome faire ſeaſon come forth muſtring, as though they would caſt, to prove themſelves, and go in again.

3 The night before they caſt, if you lay your eare to the hives mouth, you ſhall hear two or three, but eſpecially one above the reſt, cry, Up, up, up, or Tout, tout, tout, like a Trumpet ſounding the alarum to the battel.

Much deſcanting there is of, and about the maſter Bee, and their degrees, order, and Goverment: but the truth in this poynt is rather imagined, then demonſtrated. There are ſome conjectures of it, *viz.* wee ſee in the combs diverſe greater houſes then the reſt, and we commonly hear the night before they caſt, ſometime one Bee, ſometime two or more Bees, give a loud and ſeveral ſound from the reſt, and ſometimes Bees of greater bodies than the common ſort: but what of all this? I lean not on conjectures, but love to ſet down what I know to be true, and leave theſe things to them that love to divine.

Keep none weak, for it is hazard oftentimes with loſſe. Feeding will not help them: for being weak, they cannot come down to meat, or if they come down, they dye, becauſe Bees weak cannot abide cold. If none of theſe, yet will the other Bees being ſtrong, ſmell the honey, and come and ſpoyl and kill them. Some help is in caſting time, to put two weak ſwarms together, or as Tr. *Markham* well ſaith, Let them not caſt late, by raiſing them with wood or ſtone, but with impes (ſay I.) An impe is, three or four wreaths wrought as the Hive, the ſame compaſs, to raiſe the Hive withall: but by experience in tryal, I have found out a better way by Cluſtering, for late or weak ſwarms; hitherto not found out of any that I know. That is this: After caſting time, if I have any ſtock proud, and hindred from timely caſting, with former Winters poverty, or evill weather in caſting time, with two handles and crooks fitted for the purpoſe, I turn up that ſtock ſo peſtered

Catching.

Cluſtering.

ſtered with Bees, and ſet it on the crown, upon which ſo turned with the mouth upward I place another empty hive well dreſt, and ſpelkt, into which without any labour, the ſwarm that would not depart, and caſt, will preſently aſcend, becauſe the old Bees have this quality (as all other breeding creatures have) to expel the young, when they have brought them up.

There will the Swarm build as kindly, as if they had of themſelves been caſt. But be ſure you lay betwixt the Hives ſome ſtraight and cleanly ſtick or ſticks, or rather a board with holes, to keep them aſunder: otherwiſe they will joyn their works together ſo faſt that they cannot be parted. If you ſo keep them aſunder at *Michael-tide*, if you like the weight of your ſwarme (for the goodneſſe of ſwarmes is tryed by the weight) ſo catched, you may ſet it by for a ſtock to keep. Take heed in any caſe the combs be not broken, for then the other Bees will ſmell the honey, and ſpoyl them. This have I tryed to be very profitable for the ſaving of Bees.

The Inſtrument hath this form. The great ſtreight piece of wood



the reſt are iō claſps & nails, the claſps are looſe in the ſtaple, two men with two of theſe faſtned to the Hive, will eaſily turn it up.

They gather not till *July*; for then they be diſcharged of their young, or elſe they are become now ſtrong to labour and now ſap in flowres is ſtrong and proud by reaſon of time, and force of Sun. And now alſo in the North (and not before) the hearbs of greateſt vigour put forth their flowres; as Beans, Fennel, Burrage, &c.

The moſt ſenſible weather for them, is heat and draught, becauſe the neſh Bee can neither abide cold or wet; and ſhowres (which they well fore-ſee) do interrupt their labours, unleſſe they fall in the night, and ſo they further them.

After caſting *Time*, you ſhall benefit your ſtocks much, if you help them to kill their Droans, which by all probability and judgment, are an idle kind of Bees, and waſtfull. Some ſay they breed, and have ſeen young Droans in taking their honey, which I know is true. But I am of opinion that there are alſo Bees Droanes.

which have loſt their ſtings, and ſo being as it were gelded, become idle and great: there is great uſe of them. *Deus & natura nihil fecit fruſtrà.* "They hate the bees, and cauſe them caſt the "ſooner: they never come forth, but when they be over-heated; "they never come home loaden. After caſting time, and when the bees want meat, "You ſhall ſee the labouring Bees faſten on them, "two, three or four at once, as if they were theeves to be led to "the Gallows, and killing them, they caſt them out, and draw "them far from home, as hatefull enemies. Our Houſ-wife, if ſhe be the Keeper of her own bees (as ſhe had need to be) may with her bare hand in the heat of the day ſafely deſtroy them in the hives mouth. Some uſe towards night, in a hot day, to ſet before the mouth of the hive a thin board with little holes in it, at which the leſſer Bees may enter, but not the Droans; ſo that you may kill them at your pleaſure.

Annoyances. Snails ſpoyl them by night like theeves: they come ſo quietly, and are ſo faſt, that the Bees fear them not; look early and late, eſpecially in a rainy or dewy evening or morning.

Mice are no leſſe hurtfull, and the rather to Hives of ſtraw: and therefore covelings of ſtraw draw them: they will in either at the mouth, or ſhear themſelves an hole: The remedy is good Cats, Rats-bane, and Watching.

The cleanly Bee hateth the ſmoak as poyſon; therefore let your bees ſtand neerer your Garden, then your Brew-houſe or Kitchen.

They ſay Sparrowes and Swallows are enemies to Bees, but I ſee it not.

More Hives periſh by Winters cold, then by all other hurts: for the Bee is tender and nice, and only lives in warm weather, and dyes in cold: And therefore let my Houſe-wife be perſwaded, that a warm dry houſe before deſcribed, is the chiefeſt help ſhe can make her bees againſt this, and many more miſchiefs. Many uſe againſt cold in Winter, to ſtop up their hive cloſe, and ſome ſet them in houſes, perſwading themſelves, that thereby they relieve their bees. Firſt toſſing, moving, is hurtfull. Secondly, in houſes, going, knocking, & ſhaking is noyſome Thirdly, too much heat in an houſe is unnatural for them: But laſtly, and eſpecially, Bees cannot abide to be ſtopt cloſe up. For at every warme ſeaſon of the Sunne they revive, and living eate, and eating muſt needs

purge

purge abroad : in her houſe the cleanly Bee will not purge her ſelf. Judge you what it is for any living creature, not to diſburden nature. Being ſhut up in calme ſeaſons, lay your ear to the Hive and you ſhall hear them yearn and yell, as ſo many hundred priſoners. Therefore impound not your Bees, ſo profitable and free a creature.

Let none ſtand above three yeers, elſe the combs will be black and knotty, your honey will be thin and uncleanly ; and if any caſt after three yeeres it is ſuch as have ſwarms of old bees kept all together, which is great loſſe. Smoaking with Raggs, Roſen, or Brimſtone, many uſe : ſome uſe drowning in a tub of cleane water, and the water well brew'd, will be good botchet. Draw out your ſpelks immediately with a paire of pinchers, leſt the Wood grow ſoft and ſwell, and ſo will not be drawn, then muſt you cut your hive. Taking of Bees.

Let no fire come neer your honey, for fire ſoftneth the waxe and droſſe, and makes them run with the honey. Fire ſoftneth, weakneth, and hindreth hony from purging. Break your combs ſmall, when the dead empty combs are parted from the loaden combs, into a ſieve, born over a great bowl, or veſſel with two ſtaves, and ſo let it run two or three dayes. The ſooner you tun it up, the better will it purge. Run your Swarm honey by it ſelfe, and that ſhall be your beſt. The elder your Hives are, the worſe is your honey. Straining Honey.

Uſuall Veſſells are of Clay, but after wood be ſatiated with Honey (for it will leak at firſt : for honey is marvelouſly ſearching though thick, and therefore vertuous) I uſe it rather, becauſe it will not break ſo ſoon with falls, frofts, or otherwiſe, and greater veſſels of clay will hardly laſt. Veſſels.

When you uſe your Honey, with a ſpoon take off the skin which it hath put up.

And it is worth the regard, that bees thus uſed, if you have but forty ſtocks, ſhall yield you more commodity cleerly than forty Acres of Ground.

And thus much may ſuffice, to make good Houſewives love and have good Gardens and Bees.

Deo laus.

FINIS.

The

The Contents of the Country House-wifes Garden.

Chap. 1. *The Soyl* pag. 69
Chap. 2. *Site.* p. 70.
Chap. 3. *Form.* ibid.
Chap. 4. *Quantity.* 79.
Chap. 5. *Fences.* ibid.
Chap. 6. *Two Gardens* ibid.
Chap. 7. *Division of herbs.* 79.
Chap. 8. *The Husbandry of herbs.* ibid.
Chap. 9. *General Rules.* 84.
Chap. 10. *The Husbandry of Bees.* p. 85.

Bee-house. ibid.
Hives. p. 86
Hiving of Bees. p. 87.
Spelkes. ibid.
Catching. p. 88.
Clustering. ibid.
Droans. p. 89
Annoyances. p. 90
Taking of Bees. p. 91.
Straining honey. ibid.
Vessels. ibid.

A MOST PROFITABLE New Treatiſe, from approved experience of the Art of Propagating Plants.

BY

SIMON HARWARD.

CHAP. I:

The Art of Propagating Plants.

THere are four ſorts of Planting or Propagating, as in laying of ſhoots or little branches, whiles they are yet tender, in ſome pit made at their foot, as ſhall be ſaid hereafter or upon a little ladder or basket of earth, tied to the bottom of the branch, or in boaring a Willow through, and putting the branch of the tree into the hole, as ſhall be fully declared in the Chapter of Grafting.

There are likewiſe ſeaſons to Propagate in; but the beſt is in 1.

19-38

the ſpring, and *March*, when the trees are in the flowre, and doe begin to grow luſty. The young planted Siens or little grafts muſt be propagated in the beginning of Winter, a foot deep in the earth, and good manure mingled amongſt the earth, which you ſhall caſt forth of the pit wherein you mean to propagate it, to tumble it in upon it again. In like manner, your ſuperfluous Siens, or little plants muſt be cut cloſe by the earth, when as they grow about ſome ſmall Impe, which we mean to propagate, for they will do nothing but rot: For to propagate, you muſt dig the earth round about the tree, that ſo your roots may be laid in a manner halfe bare. Afterwards draw into length the pit on that ſide where you meane to propagate, and according as you perceive that the roots will be beſt able to yeeld, and
2. be governed in the ſame pit, to uſe them, and that with all gentleneſſe, and ſtop cloſe your Siens, in ſuch ſort, as that the wreath which is in the place where it is grafted, may be a little lower than the Siens of the new wood growing out of the earth, even ſo high as it poſſible may be. If the trees that you would propagate be ſomewhat thick, and thereby the harder to ply, and ſomewhat ſtiff to lay in the pit; then you may wet the ſtock almoſt to the midſt, betwixt the root and the wreathing place, ſo with gentle handling of it, bow down into the pit the wood which the grafts have put forth, and that in as round a compaſs as you can, keeping you from breaking of it: afterward lay over the cut with gummed wax, or with gravell and ſand.

CHAP. II

Grafting in the Barke.

GRafting in the Barke, is uſed from mid *Auguſt*, unto the beginning of Winter, and alſo when the Weſterne wind beginneth to blow, being from the 7 of *February*, unto the 11 of *June*. But there muſt care be had, not to graffe in the barke in any rainy ſeaſon, becauſe it would waſh away the matter of joyning the one and the other together, and ſo hinder it.

Grafting in the bud is uſed in the Summer time, from the end of *May* untill *Auguſt*, as being the time, when the trees are ſtrong and luſty, and full of ſap and leaves. To wit, in a hot Country,

country from the midſt of *June*, unto the midſt of *July*, but in cold countries to the midſt of *Auguſt*, after ſome ſmall ſhowres of Raine.

If the Summer be ſo exceedingly dry, as that ſome trees do withhold their ſap, you muſt waite the time till it doe return.

Graft from the full of the Moon, untill the end of the old.

You may graft in a cleft, without having regard to Rain, for the ſap will keep it off.

You may graft from mid *Auguſt*, to the beginning of *November*: Cowes dung with ſtraw doth mightily preſerve the graft.

It is better to graft in the evening than the morning.

The furniture and tools of a Grafter, are a basket to lay his grafts in, Clay, Gravell, Sand, or ſtrong Earth to draw over the plants cloven, Moſs, Woollen cloaths, barks of Willow to joyn to the late things and earth before ſpoken: and to keepe them faſt: Oziers to tye againe upon the barke, to keepe them firme and faſt, gummed Wax to dreſs and cover the ends and tops of the grafts newly cut, that ſo the rain and cold may not hurt them, neither yet the ſap riſing from below, be conſtrained to return again unto the ſhoots. A little Saw or hand-Saw, to ſaw off the ſtock of the plants, a little Knife or Penknife to graffe, and to cut and ſharpen the grafts, that ſo the bark may not peel nor be broken; which often commeth to paſs when the graft is full of ſap. You ſhall cut the graffe ſo long, as that it may fill the cliffe of the plant, and therewithall it muſt be left thicker on the barke-ſide, that ſo it may fill up both the cliffe and other inciſions, as any need is to be made, which muſt be alwayes well ground, well burniſhed without all ruſt. Two wedges, the one broad for thick trees, the other narrow for leſſe and tender trees, both of them of box or ſome other hard and ſmooth wood, or ſteel, or of very hard iron, that ſo they may need leſſe labour in making them ſharpe.

A little hand bill, to ſet the plants at more liberty, by cutting off ſuperfluous boughs, helved of Ivory, box, or braſill.

CHAP. III.

Grafting in the Cleft.

THe manner of Grafting in a Cleft, to wit the ſtock being cloven, is proper not only to trees, which are as great as a mans legs or arms, but alſo to greater. It is true, that being trees cannot eaſily be cloven, in their ſtock: that therefore it is expedient to make inciſion in ſome one of their branches, and not in the main body, as we ſee to be practiſed in great Apple-trees, and great Pear-trees, and as we have already declared heretofore.

To graft in the cleft, you muſt make choyce of a graft that is full of ſap and juyce, but it muſt not be, but till from after *January* untill *March*: And you muſt not thus graft in any tree that is already budded, becauſe a great part of the juyce and ſap would be already mounted up on high, and riſen to the top, and there diſperſed and ſcattered hither and thither, into every ſprig and twig, and uſe nothing welcome to the graft.

You muſt likewiſe be reſolved not to gather your graft the day you graft in, but ten or twelve dayes before: for otherwiſe if you graft it new gathered it will not be able eaſily to incorporate it ſelf with the body, and ſtock, where it ſhall be grafted; becauſe that ſome part of it will dry, and by this means will be a hindrance in the ſtock to the riſing up of the ſap, which it ſhould communicate unto the graft, for the making of it to put forth, and whereas the dryed part will fall a crumbling, and breaking through his rottenneſſe, it will cauſe to remain a concavity, or hollow place in the ſtock, which will be an occaſion of a like inconvenience to befall the graft. Moreover, the graft being new and tender, might eaſily be hurt of the bands, which are of neceſſity to be tyed about the Stock, to keep the graft firm and faſt. And you muſt further ſee, that your Plant was not of late removed, but that it have already fully taken Roote.

7. When you are minded to graft many grafts into one Cleft, you muſt ſee that they be cut in the end all alike.

See that the grafts be of one length, or not much differing, and it is enough, that they have three or four eylets without the Wrench when the Plant is once ſawed, and lopped of all his bran-

branches if it have many: then you muſt leave but two at the moſt before you come to the cleaving of it; then put to your little Saw, or your Knife, or other edged tool that is very ſharp, cleave it quite thorough the middeſt, in gentle and ſoft ſort: Firſt, tying the ſtock very ſure, that ſo it may not cleave further than is need: and then put to your wedges into the cleft untill ſuch time as you have ſet in your grafts, and in cleaving of it, hold the Knife with the one hand, and the tree with the other, to help to keep it from cleaving too far. Afterwards put in your wedge of Box or Brazil, or bone, at the ſmall end; ſo that you may the better take it out again when you have ſet in your grafts.

If the ſtock be cloven, or the bark looſed too much from the wood: then cleave it down lower, and ſet your grafts in, and look that their Inciſion be fit, and very juſtly anſwerable to the cleft, and that the two ſaps, firſt, of the plant and graft be right and even ſet one againſt the other, and ſo handſomely fitted, as that there may not bee the leaſt appearance of any cut or cleft. For if they do not thus jump one with another, they will never take one with another, becauſe they cannot work their ſeeming matter, and as it were cartilaginous glue in convenient ſort or manner to the gluing of their joynts together. You muſt likewiſe beware not to make your cleft overthwart the pitch, but ſomewhat aſide.

The bark of your plant being thicker than that of your graft, you muſt ſet the graft ſo much the more outwardly in the cleft, that ſo the two ſaps may in any caſe be joyned, and ſet right the one with the other, but the rind of the plant muſt be ſomewhat more out than that of the grafts or cloven ſide.

To the end that you may not faile of this work of imping, you muſt principally take heed, not to over-cleave the ſtocks of your trees. But before you widen the cleft with your wedges, bind and go about the ſtock with two or three turns, and that with an Ozier, cloſe drawn together, underneath the ſame place, where you would have your cleft to end, that ſo your ſtock cleave not too far, which is a very uſuall cauſe of the miſcarrying of grafts, in as much as hereby the cleft ſtandeth ſo wide and open, as that it cannot be ſhut, and ſo not grow together again; but in the mean time ſpendeth it ſelf, and breatheth out all his life in 10.

that

that place, which is the cauſe that the ſtock & the Graft are both ſpilt. And this falleth outmoſt often in plum trees, and branches of trees. You muſt be carefull to joyne the rinds of your grafts, and plants, that nothing may continue open, to the end that the wind, moiſture of the Clay or Raine running upon the grafted place, do not get in: when the plant cleaveth very ſtreight, there is not any danger nor hardneſſe in ſloping downe the graft.

10. If you leave it ſomewhat uneven or rough in ſome places, or that the ſaps both of the one and the other may the better grow, and be glewed together, when your grafts are once well joyned to your plants, draw out your wedges very ſoftly, leſt you diſplace them again: you may leave therewith in the cleft ſome ſmall end of a wedge of green wood, cutting it very cloſe with the head of the Stock: Some caſt glue into the cleft, ſome ſuger, and ſome gummed Wax.

11. If the Stock of the Plant, whereupon you intend to graft, be not ſo thick as your graft, you ſhall graft it after the faſhion of a Goats foot, make a cleft in the ſtock of the plant, not direct, but byas, and that ſmooth and even, not rough: then apply and make faſt thereto the graft with all his bark on, and anſwering to the bark of the Plant. This being done, cover the place with the fat earth and moſs of the Woods tyed together with a ſtrong band: ſtick a pole of Wood by it to keep it ſtedfaſt.

CHAP. IV.

Grafting like a Scutcheon.

IN grafting after the manner of a Scutcheon, you ſhall not vary not differ much from that of the Flute or pipe, ſave onely that the Scutcheon-like graft having one eylet, as the other hath, yet the wood of the tree whereupon the Scutcheon-like graft is grafted hath not any knob, or bud, as the wood whereupon the graft is grafted after the manner of a pipe.

12. In Summer when the trees are well repleniſhed with ſap, and that their new Siens begin to grow ſomewhat hard, you ſhall take a ſhoot at the end of the chief branches of ſome noble and reclaimed trees: whereof you would fain have ſome fruit, and not many of his old ſtore or wood, and from thence raiſe a good eylet, the tail and all thereof to make your grafts. But when you chooſe, take the thickeſt, and groſſeſt, divide the tail in the

the midſt before you do any thing elſe, caſting away the leaf (if it be not a pear-plum-tree: for that would have two or three leaves) without removing any more of the ſaid taile: afterward with the point of a ſharp knife, cut off the Bark of the ſaid ſhoot, the pattern of a ſhield, of the length of a nail.

In which there is onely one eylet higher than the midſt, together with the reſidue of the tail which you left behind: and for the lifting up of the ſaid graft in Scutcheon, after that you have cut the bark of the ſhoot round about, without cutting of the wood within, you muſt take it gently with your thumb, and in putting it away you muſt preſſe upon the wood from which you pull it, that ſo you may bring the bud and all away together with the Scutcheon: for if you leave it behind with the wood, then were the Scutcheon nothing worth. You ſhall finde out if the Scutcheon be nothing worth, if looking within when it is pulled away from the wood of the ſame ſuit, you find it to have a hole within, but more manifeſtly, if the bud do ſtay behind in the wood, which ought to have been in the Scutcheon. 13.

Thus your Scutcheon being well raiſed and taken off, hold it a little by the taile betwixt your lips, without wetting of it, even untill you have cut the barke of the tree where you would graft it, and look that it be cut without any wounding of the wood within, after the manner of a crutch, but ſomewhat longer than the Scutcheon that you have to ſet in it, and in no place cutting the wood within: after you have made inciſion, you muſt open it, and make it gape wide on both ſides, but in all manner of gentle handling & that with a little Sizers of bone, and ſeparating the wood and the bark a little within, even ſo much as your Scutcheon is in length and breadth: you muſt take heed that in doing hereof, you do not hurt the bark. 14.

This done, take your Scutcheon by the end, and your taile which you have left remaining, and put into your inciſion made in your tree, lifting up ſoftly your two ſides of the inciſion with your ſaid Sizers of bone, and cauſe the ſaid Scutcheon to joyne; and lye as cloſe as may be, with the wood of the tree, being cut as aforeſaid, in waying a little upon the end of your rinde ſo cut: and let the upper part of your Scutcheon lye cloſe unto the upper end of your inciſion, or bark of your ſaid tree: afterwards 15.

bind

bind your Scutcheon about with a band of Hempe, as thick as a pen of a quill, more or leſe, according as your tree is ſmall or great, taking the ſame Hempe in the middeſt, to the end that either part of it may performe a like ſervice; and wreathing and binding of the ſaid Scutcheon into the inciſion of a tree and it muſt not be tyed too ſtreght, for that will keepe it from taking, the joyning of the one ſap to the other being hindred thereby, and neyther the Scutcheon nor yet the Hemp muſt be moiſt or wet: and the more juſtly to bind them together, begin at the back ſide of the tree, right over againſt the middeſt the inciſion, and from thence come forward to joyne them before, above the eylet and taile of the Scutcheon, croſſing your band of hemp, ſo oft as the two ends meet; and from thence returning back againe, come about and tye it likewiſe underneath the eylets, and thus caſt about your band ſtill backward and forward untill the whole cliſt of the inciſion be covered above and below with the ſaid Hemp, the eylet onely excepted, and his taile,

17. which muſt not be covered at all; his taile will fall away one part after another, and that ſhortly after the ingrafting, if ſo be the Scutcheon will take. Leave your trees and Scutcheons thus bound for the ſpace of one month; and the thicker, a great deale longer time. Afterward look them over, and if you perceive them to grow together untie them, or at leaſtwiſe cut the Hempe behind them, and leave them uncovered. Cut alſo your branch two or three fingers above that, ſo the impe may proſper the better: and thus let them remaine till after winter, about the month of *March* and *Aprill*.

18. If you perceive that the budde of your Scutcheon doe ſwell and come forward, then cut off the tree three fingers or thereabouts, above the Scutcheon: for if it be cut off too neer the Scutcheon, at ſuch time as it putteth forth his firſt bloſſome, it would be a meanes greatly to hinder the flowing of it, and cauſe alſo that it ſhould not thrive and proſper well: after that one yeer is paſt, and that the ſhoot beginneth to be ſtrong, beginning to put forth the ſecond bud and bloſſome, you muſt go forward to cut off in lyas-wiſe the three fingers in the top of the tree which you left there, when you cut it in the year going before as hath been ſaid.

When

When your ſhoot ſhall have put forth a great deal of length, 19
you may ſtick down there, even hard joyned thereunto, little ſtakes, tying them together very gently and eaſily; and theſe ſhall ſtay your ſhoots and prop them up, letting the wind from doing any harm unto them. Thus you may graft white Roſes in red, and red in white. Thus you may graft two or three Scutcheons, provided that they be all of one ſide; for they will not be ſet equally together in height, becauſe then they would be all 20
ſtarvelings; neither would they be directly one over another; for the lower would ſtay the riſing up of the ſap of the Tree, and ſo thoſe above ſhould conſume in penury, and undergo the aforeſaid inconvenience. You muſt note, that the Scutcheon which is gathered from the Sien of a tree whoſe fruit is ſowre, muſt be cut in ſquare form, and not in the plain faſhion of a Scutcheon. It is ordinary to graffe the ſweet Quince Tree, baſtard Peach-tree, Apricock-tree, Jujube tree, ſowre Cherry-tree, ſweet Cherry-tree, and Cheſtnut-tree, after this faſhion, howbeit they may be grafted in the cleft more eaſily, and more profitably; although divers be of a contrary opinion, as thus: Take the grafts of ſweet Quince-tree, and Baſtard Peach-tree, of the faireſt wood, and beſt fed that you can find, growing upon the wood of two years old, becauſe the wood is not ſo firme and ſolid as the others; and you ſhall graft them upon ſmall Plum-tree ſtocks, being of the thickneſſe of ones thumb; theſe you ſhall cut after the manner of a Goats foot: you ſhall not goe about to 21
make the cleft of any more ſides then one, being about a foot high from the ground; you muſt open it with your ſmall wedge: and being thus grafted, it will ſeem to you that it is open but of one ſide; afterward you ſhall wrap it up with a little Moſſe, putting thereto ſome gummed Wax, or Clay, and bind it up with Oziers to keep it ſurer, becauſe the ſtock is not ſtrong enough it ſelf to hold it, and you ſhall furniſh it every manner of way, as others are dealt withall; this is moſt profitable.

The time of Grafting.

All Months are good to graft in, (the Month of *October* and *November* onely excepted) But commonly, graft at that time of

the winter, when the ſap beginneth to ariſe.

In a cold Country graft later, in a warme Country earlier.

The beſt time generally is from the firſt of *February*, untill the firſt of *May*.

The grafts muſt alwayes be gathered in the old of the Moon.

For grafts chooſe ſhoots of a year old, or at the futhermoſt two years old.

If you muſt carry grafts far, prick them into a Turnep newly gathered, or lay earth about the ends.

If you ſet ſtones of Plummes, Almonds, Nuts, or Peaches, Firſt let them lye a little in the Sun, and then ſteep them in Milk or Water three or four dayes, before you put them into the earth.

Dry the Kernels of Pippins, and ſow them in the end of *November*.

The ſtone of a Plum-tree muſt be Set a foot deep, in *November* or *February*.

The Date ſtone muſt be Set the great end downwards, two cubits deep in the earth, in a place enriched with dung.

The Peach-ſtone would be Set preſently after the Fruit is eaten, ſome quantity of the fleſh of the Peach remaining about the ſtone.

If you would have it to be excellent, graft it afterward upon an Almond tree.

The little Siens of Cherry-trees, grown thick with haire, rots, and thoſe alſo which do grow up from the Roots of the great Cherry-trees, being removed, do grow better and ſooner then they which come of ſtones: but they muſt be removed and planted, while they are but two or three years old, the branches muſt be lopped.

A very profitable Invention, for the ſpeedy Planting of an Orchard of Fruit-Trees.

ABout the end (or rather the middle) of *June*, the ſap being then in the boughes or Tops of the Trees, let ſome one of diſcretion goe up into the boughes of the Tree intended, and with a keen-knife cut the bark of ſome ſmooth bough, ſo choſen, round about the ſame, quite through the ſame bark, to the very bare wood, in two places, (toward the but of the bough) a full hand breadth the one from the other, and take off the bark clean clearly from the ſaid bough, and caſt it away, and wipe the ſap off that bared place; Then take ſome of the ſtiffeſt clay you can have, and wrap it hard, round about the ſaid bared place, (that it may ſtop the ſap when it deſcendeth;) bind on this clay with ſallow ſlings, or the like, very hard; let this clay be two inches thick at leaſt. Then prepare a certain quantity of good ranke mould; tempered with ſhort muck and misken water, and make mortar thereof, and wrap a good quantity of it as big as a foot ball, upon the firme bark remaining cloſe above the ſaid clay, that it may touch the ſame; put moſſe upon it, & as before, bind it well, and ſo let it continue growing upon the ſame Tree till *February*. Then with a fine ſaw carefully take off the ſaid bough cloſe below the clay, not periſhing the upper mortar; and ſet that bough, with the clay and mortar on it, in ſome good ground, and there let it remain to grow; for the ſap it cannot paſſe downward for the clay but ſtayeth in the upper mortar, and breeds roots, and poſſibly (God willing) may bear fruit the next Summer following. Thus you may order many ſuch boughes as aforeſaid, and quickly plant an Orchard of bearing Trees. If the bough be as big as the ſmall of ones leg, it is ſo much the better: *probatum eſt.*

The Contents of the Art of *Propagating Plants.*

THe Art of Propagating Plaats. 93.
Grafting in the Bark. 95.
Grafting in the cleft. 96.
Grafters tools.
Time of Planting and Setting.
Time of grafting.
How to cut the ſtumps in graſting.
Sprouts and imps: how gathered.
Grafting like a Scutcheon. 98.
Inoculation in the Bark.
Emplaiſter-wiſe grafting.
To prick ſticks to bear the firſt year.
To have Cherries or Plums without ſtones.
To make Quinces great.
To Set ſtones of Plums.
Dates, Nuts, and Peaches.
To make fruit ſmell well.
To plant Cherry-trees.

THE

THE

HUSBAND MANS

Fruitfull Orchard.

For the true ordering of all ſorts of Fruits in their due ſeaſons : and how double increaſe comes by care in gathering year after year : as alſo the beſt way of carring by land or by water, with their preſervation for longeſt continuance.

OF all ſtone Fruit, Cherries are the firſt to be gathered : of which though we reckon foure ſorts ; *Engliſh*, *Flemmiſh*, *Gaſcoigne*, and *Black*, yet are they reduced to two, the early, and the ordinary ; the early are thoſe whoſe grafts came firſt from *France* and *Flanders*, and are now ripe with us in *May* : the ordinary is our own naturall Cherry, and is not ripe before *June* : they muſt be carefully kept from Birds, either with nets, noiſe, or other induſtry.

They

20-38

Gathering of Cherries. They are not all ripe at once, nor may be gathered at once, therefore with a light Ladder, made to ſtand of it ſelfe without hurting the boughes, mount to the Tree, and with a gathering hook, gather thoſe which be full Ripe, and put them into your Cherry-pot, or Kybzey hanging by your ſide, or upon any bough you pleaſe, and be ſure to break no ſtalk, but that the cherry hangs by, and pull them gently, lay them down tenderly, and handle them as little as you can.

To carry Cherries. For the conveyance or portage of Cherries, they are beſt to be carried in broad Baskets like ſives, with ſmooth yielding bottoms, only two broad laths going along the bottome: and if you do tranſport them by ſhip, or boat, let not the ſives be filled to the top, leſt ſetting one upon another, you bruiſe and hurt the Cherries: if you carry by horſe-back, then panniers well lined with Fearne, and packt full and cloſe is the beſt and ſafeſt way.

Other ſtone-fruit. Now for the gathering of all other ſtone fruit, as Nectarines, Apricocks, Peaches, Peare-Plummes, Damſons, Bullas, and ſuch like, although in their ſeverall kinds, they ſeem not to be ripe at once on one Tree: yet when any is ready to drop from the Tree, though the other ſeem hard, yet they may alſo be gathered, for they have received the full ſubſtance the tree can give them; and therefore the day being faire, and the dew drawn away, ſet up your Ladder, and as you gathered your Cherries ſo gather them: onely in the bottoms of your large ſives, where you part them, you ſhall lay Nettles, and likewiſe in the top, for that will ripen thoſe that are moſt unready.

Gathering of Peares. In gathering of Pears are three things obſerved: to gather for expence, for tranſportation, or to ſell to the Apothecary. If for expence, and your own uſe, then gather them as ſoon as they change, and are as it were half ripe, and no more but thoſe which are changed, letting the reſt hang till they change alſo: for thus they will ripen kindly, and not rot ſo ſoon, as if they were full ripe at the gathering. But if your Peares be to be tranſported far either by Land or Water, then pull one from the Tree, and cut it in the middeſt, and if you find it hollow about the coare, and the kernell a large ſpace to lye in, although no Peare

be

be ready to drop from the Tree, yet then they may be gathered, and then laying them on a heap one upon another, as of neceſſity they muſt be for tranſportation, they will ripen of themſelves, and eat kindly: but gathered before, they will wither, ſhrink, and eate rough, loſing not onely their taſt, but beauty.

Now for the manner of gathering, albeit ſome clime into the trees by the boughes, and ſome by Ladder, yet both is amiſſe; the beſt way is with the Ladder before ſpoken of, which ſtandeth of it ſelf, with a basket and a line, which being full, you muſt gently let down, and keeping the ſtring ſtill in your hand, being emptied, draw it up again, and ſo finiſh your labour, without troubling your ſelf, or hurting the Tree. Gathering of Apples.

Now touching the gathering of Apples, it is to be done according to the ripening of the fruit; your Summer Apples firſt, and the Winter after.

For Summer fruit, when it is ripe, ſome will drop from the Tree, and Birds will be pecking at them: But if you cut out one of the greeneſt, and find it as was ſhew'd you before of the Peare: then you may gather them, and in the houſe they will come to their ripeneſſe and perfection. For your Winter fruit, you ſhall know the ripeneſs by the obſervation before ſhewed; but it muſt be gathered in a fair, Sunny, and dry day, in the waine of the Moone, and no Wind in the Eaſt, alſo after the dew is gone away; for the leaſt wet or moyſture will make them ſubject to rot and mildew; alſo you muſt have an apron to gather in, and to empty into the great basket, and a hook to draw the boughes unto you, which you cannot reach with your hands at eaſe: the apron is to be an Ell every way, loopt up to your girdle, ſo as it may ſerve for either hand without any trouble: and when it is full, unlooſe one of your loopes, and empty it gently into the great basket, for in throwing them down roughly, their owne ſtalkes may prick them, and thoſe which are prickt, will ever rot. Againe, you muſt gather your fruit clean without leaves or brunts, becauſe the one hurts the Tree, for every brunt would be a ſtalk for fruit to grow upon: the other, hurts the fruit by bruiſing, and pricking it, as it is laid together, and there is nothing ſooner rotteth fruit,

fruit, then the green and withered leaves lying among them; neither muſt you gather them without any ſtalke at all: for ſuch fruit will begin to rot where the ſtalk ſtood.

To uſe the fallings.

For ſuch fruit as falleth from the trees, and are not gathered, they muſt not be laid with the gathered fruit: and of fallings there are two ſorts; one that falls through ripeneſſe, and they are beſt, and may be kept to bake or roaſt: the other windfals, falling before they are ripe; and they, muſt be ſpent as they are gathered, or elſe they will wither and come to nothing; and therefore it is not good by any means to beat down fruit with Poles, or to carry them in carts looſe and jogging, or in ſacks where they may be bruiſed.

Carriage of fruit.

When your fruit is gathered, you ſhall lay them in deep Baskets of Wicker, which ſhall contain four or ſix buſhels, and ſo between two men, carry them to your Apple Loft; and in ſhooting, or laying them downe, be very carefull that it be done with all gentleneſſe, and leaſure, laying every ſort of fruit ſeverally by it ſelf: but if there be want of room, having ſo many ſorts that you cannot lay them ſeverally, then ſome ſuch fruit as is neareſt in taſte and colour, and of Winter fruit, ſuch as will taſte alike, may, if need require, be laid together, and in time you may ſeparate them, as ſhall be ſhewed hereafter. But if your fruit be gathered far from your Apple-Loft, then muſt the bottomes of your Baskets be lined with green Ferne, and draw the ſtubborn ends of the ſame through the Basket, that none but the ſoft leaf may touch the fruit, and likewiſe cover the tops of the Baskets with Fearne alſo, and draw a ſmall cord over it, that the Ferne may not fall away, nor the fruit ſcatter out, or jogge up and downe: and thus you may carry fruit by Land or by Water, by Boat, or Cart, as farre as you pleaſe: and the Ferne doth not onely keep them from bruiſing, but alſo ripens them, eſpecially Peares. When your fruit is brought to your Apple Loft, or ſtore-houſe, if you find them not ripened enough, then lay them in thicker heaps upon Ferne, and cover them with Ferne alſo: and when they are neer ripe, then uncover them, and make the heaps thinner, ſo as the ayr may paſſe through them: and if you will not haſten the ripening of them, then lay them on the boards without

out any Ferne at all. Now for Winter, or long lasting Peares, they may be packt either in Fern or Straw, and carried whither you please; and being come to the journies end must be laid upon sweet straw: but beware the room be not too warme, nor windy, and too coole, for both are hurtfull: but in a temperate place, where they may have air, but not too much.

Wardens are to be gathered, carried, packt, and laid as Winter Pears are. Of Wardens.

Medlers are to be gathered about *Michaelmas*, after a frost hath toucht them; at which time they are in their full growth, and will then be dropping from the tree, but never ripe upon the tree. When they are gathered, they must be laid in a basket, sieve, barrell, or any such caske, and wrapt about with woollen cloaths, under, over, and on all sides, and also some weight laid upon them, with a board between: for except they be brought into a heat, they will never ripen kindly, or taste well. Of Medlers.

Now when they have laine till you think some of them be ripe, the ripest, still as they ripen, must be taken from the rest; therefore powre them out into another sieve or basket leasurely, that so you may well find them that be the ripest, letting the hard ones fall into the other basket, and those which be ripe laid aside: the other that be half ripe sever also into a third sieve or basket: for if the ripe and half ripe be kept together, the one will be mouldy, before the other be ripe: And thus do till all be throughly ripe.

Quinces should not be laid with other fruit; for the sent is offensive both to other fruit, and to those that keep the fruit or come amongst them; therefore lay them by themselves upon sweet straw, where they may have aire enough: they must be packt like Medlers, and gathered with Medlers. Of Quinces.

Apples must be packt in Wheat or Rye straw, and in maunds or baskets loined with the same, and being gently handled, will ripen with such packing and lying together. If severall sorts of apples be packt in one maund or basket, then between every sort lay sweet straw of a pretty thicknesse. To pack Apples.

Apples must not be powred out, but with care and leasure: first, the straw pickt clean from them, and then gently Emptying and laying apples.

take out every ſeveral ſort, and place them by themſelves : but if for want of room you mixe the ſorts together, then lay thoſe together that are of equal laſting : but if they have all one taſte, then they need no ſeparation. Apples that are not of like colours ſhould not be laid together, and if any ſuch be mingled, let it be amended, and thoſe which are firſt ripe, let them be firſt ſpent, and to that end, lay thoſe apples together, that are of one time of ripening ; and thus you muſt uſe Pippins alſo, yet will they indure bruiſes better than any other fruit, and whilſt they are green will heal one another.

Difference in fruit.

Pippins though they grow of one tree, and in one ground, yet ſome will laſt better than other-ſome, and ſome will be bigger then others of the ſame kind, according as they have more or leſſe of the Sun; or more or leſſe of the droppings of the trees or upper branches : therefore let every one make moſt of that fruit which is faireſt, and longeſt laſting. Again, the largeneſſe and goodneſſe of fruit conſiſts in the age of the tree : for as the tree increaſeth, ſo the fruit increaſeth in bigneſſe, beauty, taſte, and firmneſſe; and otherwiſe as it decreaſeth.

Tranſporting fruit by water.

If you be to tranſport your fruit far by water, then provide ſome dry hogſheads or barrells, and pack in your apples, one by one, with your hand, that no empty place may be left, to occaſion ſogging ; and you muſt line your veſſel at both ends with fine ſweet ſtraw ; but not the ſides, to avoid heat ; and you muſt then bore a dozen holes at either end, to receive aire ſo much the better, and by no means let them take wet. Some uſe, that tranſport beyond ſeas, to ſhut the fruit under hatches upon ſtraw : but it is not ſo good, if casks may be gotten.

When not to tranſport fruit

It is not good to tranſport fruit in *March*, when the wind blows bitterly, nor in froſty weather, neither in the extream heat of Summer.

To convey ſmall ſtore of fruit.

If the quantity be ſmall you would carry, then you may carry them in doſſers or paniers, provided they may be ever filled cloſe ; and that Cherries and Pears be lined with green Ferne, and Apples with ſweet ſtraw; and that but at the bottomes and tops, not on the ſides.

Roomes for fruit.

Winter fruit muſt lye neither too hot, nor too cold, too cloſe, nor too open : for all are offenſive. A low Room or Cellar that

that is ſweet, and either boarded or paved, and not too cloſe, is good, from *Chriſtmas* till *March* ; and Roomes that are ſeiled over-head, and from the ground, are good from *March* till *May*, then the Cellar again, from *May* till *Michaelmas*. The apple-loft would be ſeiled or boarded, which if it want, take the longeſt Rye-ſtraw, and raiſe it againſt the walls, to make a fence as high as the fruit lyeth ; and let it be no thicker than to keep the fruit from the wall, which being moiſt, may do hurt, or if not moiſt, then the duſt is offenſive.

There are ſome fruit which will laſt but untill *Allhallantide* ; they muſt be laid by themſelves : then thoſe which will laſt till *Chriſtmas*, by themſelves ; then thoſe which will laſt till it be *Candlemas*, by themſelves ; thoſe that will laſt till *Shrovetide*, by themſelves ; and Pippins, Apple-Johns, Peare-maines, and Winter Ruſſettings, which will laſt all the yeer, by themſelves. Sorting of fruit.

Now if you ſpye any rotten fruit in your heaps, pick them out, and with a Tray for the purpoſe, ſee you turne the heapes over, and leave not a tainted Apple in them, dividing the hardeſt by themſelves, and the broken skinned by themſelves to be firſt ſpent, and the rotten ones to be caſt away ; and ever as you turn them, and pick them, under-lay them with freſh ſtraw : thus ſhall you keepe them for your uſe, which otherwiſe would rot ſuddenly.

Pippins, John Apples, Pear maines, and ſuch like long laſting fruit, need not to be turned till the week before *Chriſtmas*, unleſſe they be mixt with the other of riper kind, or that the fallings be alſo with them, or much of the firſt ſtraw left amongſt them : the next time of turning is at *Shrove-tide*, and after that once a month till *Whitſon-tide*; and after that, once a fortnight ; and ever in the turning lay your heaps lower and lower, and your ſtraw very thinne : provided you doe none of this labour in any great froſt, except it be in a cloſe Celler. At every thaw, all fruit is moiſt, and then they muſt not be touched : neither in rainy weather, for then they will be dank alſo ; and therefore at ſuch ſeaſons it is good to ſet open your windows and doores, that the air may have free paſſage to dry them, and at nine of the clock in the forenoon in Winter ; and at ſixe in the forenoone Time of ſtirring fruit.

and at eight at night in Summer; only in *March*, open not your windows at all.

All lasting fruit, after the midst of *May*, begin to wither, because then they wax dry, and the moisture gone, which made them look plumpe, they must needs wither, and be small; and nature decaying, they must needs rot. And thus much touching the ordering of fruits.

FINIS.